



AEROMEDICAL TECHNICAL BULLETINS

(Updated 11 March 2008)

ATB: ADMINISTRATIVE GUIDE TABLE OF CONTENTS

STATEMENT OF PURPOSE

THE ARMY FLIGHT PHYSICAL

- Definition and Responsibility for Flying Duty Medical Examination (FDME and Interim FDHS)
- Proponent For Aeromedical Policy and Standards
- Types of Physicals—The Basics
- Aeromedical Standards Class or Physical “Class”
- Types of Physicals—The Bigger Picture
 - Initial FDME
 - Comprehensive (Long) FDME
 - Interim or Abbreviated (Short) Flying Duty Health Screen
- Birth Month Window
- Birth Month Realignment
- Extensions
- Civilian Aeromedical Providers and AMEs Physicals
- Table 1: Birth Month Realignment Table
- Internal Summary—The Army Flight Physical, Key Points

COMPLETING THE FDME PAPERWORK

- Part 1
- Part 2
- FDME/FDHS Checklists
- The Required Forms—these are available in AERO
- Table 2: Summary of Requirements for FDME/FDHS (updated 13 JAN 08)
- Table 3: Summary of DD Forms 2807-1/2808, Jul 2001 (updated 13 JAN 08)
- Table 4: Summary of DA Form 4497-R, Mar 2002 (updated 13 JAN 08)
- Table 5: Summary of Aeromedical Standards—Vision, Hearing, Labs, Anthropometrics (13 JAN 08)
- Table 6: Corneal Refractive Surgery Information Required by USAAMA (30 APR 07)
- Table 7: Army Anthropometric Standards for Entry Pilot Training
- Special Tests—Aviation Unique
- Aeromedical Adaptability (AA)

AEROMEDICAL DISPOSITION

- Medical Recommendation
- Approval Authority
- FDME/FDHS Review and Disposition
- Waiver/Exception to Policy (ETP) Review and Disposition
- The Waiver Process
 - Aeromedical Consultants Advisory Panel (ACAP)
 - Waiver/ETP Criteria
 - Sharing Information With Outside Agencies
 - Temporary Clearance Pending Waiver
 - Aeromedical Summary: Guide to Completion
- The Aeromedical Epidemiological Data Repository (AEDR)
- Review of The AMS / Waiver Process
- Table 8: Waiver Authorities

ATB: AEROMEDICAL GRADED EXERCISE TEST (GXT)

ATB: ATC MEDICAL STANDARDS (DAC AND CIVILIAN CONTRACT)

- Table 9: Summary of DD Form 2808 for OPM Standards, Jul 2001
- Table 10: OPM/GS-2152 DAC/CIVILIAN CONTRACT ATC STANDARDS SUMMARY

ATB: DEPTH PERCEPTION TESTING

ATB: COLOR VISION TESTING

ATB: CYCLOPLEGIC REFRACTION

ATB: DA FORM 4186 USAGE

ATB: FIELD OF VISION TESTING

ATB: MANIFEST/SUBJECTIVE REFRACTION

ATB: NIGHT VISION

ATB: OCULAR MOTILITY

ATB: READING ALOUD TEST

ATB: VALSALVA MANEUVER

ATB: MANAGEMENT OF INTERNATIONAL MILITARY PILOTS AND STUDENT PILOT CANDIDATES

ADMINISTRATIVE GUIDE STATEMENT OF PURPOSE

This guide is intended to provide aeromedical providers (flight surgeons, aeromedical physician assistants, aviation medicine nurse practitioners, and aeromedical examiners) and the office staff all the tools necessary for accurately completing flying duty medical exams (FDME), flight duty health screens (FDHS), and aeromedical summaries (AMS). The required Aeromedical Policy letters and aeromedical technical bulletins (ATB) are available on the USAAMA website: <https://aamaweb.usaama.rucker.amedd.army.mil>.

Additionally, all will find convenient flowsheets and tables designed to ensure that flight physicals (referred to simply as “physicals” in the remainder of this chapter) are performed correctly and completely, thereby minimizing returns for errors. This is a living document and gets updated frequently. Everyone should check the USAAMA website periodically and view the latest updates: <https://aamaweb.usaama.rucker.amedd.army.mil>.

In addition to guaranteeing a complete physical, the flowsheets and tables will ensure:

1. Other regulatory and preventive health requirements are adhered to (annual pap smears for women, mammogram, retirement physical requirements, etc.).
2. Important readiness issues are addressed (HIV, dental, eyeglass prescriptions).

Summary sheets of aeromedical standards are provided. These tables (2 through 7) should be utilized whenever personnel are reviewing physicals prior to electronically submitting or mailing them to Ft. Rucker. These sheets along with electronic standards checking with the AERO (Aeromedical Electronic Resource Office) will help ensure that all required entries are made and to standard.

There are “special tests” that most probably never heard of or were aware of in such detail prior to becoming a flight surgeon and that are often performed poorly in the field. These are the reading aloud test, anthropometrics, cycloplegic refraction, and stereopsis among others. Each test is addressed in an aeromedical technical bulletin available via the USAAMA website.

In order to help all complete high quality AMSs, there is a section covering the waiver process. Included are templates for both the complete AMS and the abbreviated AMS. AERO has greatly eased the creation and submission of Aeromedical Summaries and is the preferred method for managing these. This is followed by a brief discussion of the Aeromedical Consultation Service and the waiver authorities. This will help explain the disposition of AMSs / waiver requests.

Please address any comments or questions about this guide or USAAMA policy via the helpdesk. Links to the helpdesk can be found on the USAAMA web page, listed above, or on the AERO site. Feedback is key to system improvement and keeping information current.

THE ARMY FLIGHT PHYSICAL

Definition and Responsibility for Flight Physicals (FDME and FDHS)

The FDME is a periodic, comprehensive medical examination performed for occupational and preventive medicine purposes. The FDME is used as a starting point for the careful evaluation and treatment of aircrew members. It includes a review of medical history, which often alerts the flight surgeon to potentially disqualifying conditions that may require further assessment in the course of completing the examination. It promotes and preserves the fitness, deployability, and safety of aviation personnel. The FDHS is the interim health-screening tool done between comprehensive FDMEs. Medical history should be reviewed and to comply with the Annual PHA requirements formally documented on the DD2807-1—review the medical records and AHLTA for entries. The goal is to ensure maintenance of aircrew health and fitness for aviation duty and serve as an opportunity for health promotion. With the introduction of the annual PHA, additional screening and counseling requirements will be set forth in AERO so all annual military needs are met in one setting. All should be familiar with the USPSTF requirements to comply with completion of the annual PHA.

The aircrew member is responsible for maintaining a current medical certification—DA Form 4186, Medical Recommendation for Flying Duty. In order to have a current DA Form 4186, the aircrew member **MUST** maintain a current and qualified FDME/FDHS. The following Army regulations and publications address the importance of the physical and place the responsibility squarely on the aircrew member.

- **AR 600-105** is applicable to **rated** aircrew (pilots and flight surgeons) and stipulates that Army officers who enter aviation service must continually maintain medical and professional standards. Failure to maintain medical certification is reason to convene a Flying Evaluation Board (FEB). All aviators regardless of component or whether or not assigned to operational flying duties must maintain certification for flying duty through timely completion of the physical.
- **AR 600-106** covers **non-rated** aircrew (flight medics, aeromedical psychologists, flight engineers, crew chiefs, stewards, et al) and has similar stipulations.
- **FM 3-04.300** covers flight operations procedures and mandates that individuals who do not have a current flight physical or flight physical extension will be suspended from flying status until medical clearance is given.

Proponent for Aeromedical Policy and Standards

US Army Aeromedical Activity (USAAMA): USAAMA is located at Ft. Rucker and is responsible for:

1. Writing, implementing and interpreting aeromedical policy in consultation and for the Aeromedical Consultant,
2. Review and disposition of all class 1, 2 and 4 flight physicals and referred class 3 issues,
3. Final aeromedical recommendation regarding waiver recommendations in cases of disqualified aircrew; and,
4. Maintaining the Aviation Epidemiology Data Registry (AEDR).

Types of Physicals—the Basics

There are three broad categories of FDMEs and the Flight Duty Health Screen. They are:

1. **Initial FDME**—Performed for accession purposes and is comprehensive. This is valid for up to 18 months regardless of physical class.
2. **Comprehensive FDME**— Performed on trained rated and non-rated aircrew, covering the annual PHA and retention requirements. This is performed every 5 years between the ages 20 and 50 and then annually thereafter. The five year period shall be aligned as practicable with ages ending in “0” or “5” so comprehensives are accomplished at 25, 30, 35, 40, 45, and 50—this makes clinic management and scheduling simpler and easy to remember. It is generally valid for 12 months and is synchronized to expire at the end of the aircrew member’s birth month. Comprehensives may be done more frequently at the discretion of the flight surgeon or as part of the requirements for aeromedical waivers or after mishap.
3. **Rucker FDME**—Performed only at Lyster Army Health Clinic, Fort Rucker, on Class 1 Flight School students just prior to beginning flight training. This reviews, documents, and verifies medical qualification for flight training as well as addresses any interim aeromedically significant changes since completing the Initial FDME. This is valid for up to 24 months at Fort Rucker to allow the flight student to complete flight training. Often upon completion and PCS, the graduated flight student upon reporting to the next duty station will require a FDME/FDHS with birthmonth realignment.

4. **FDHS**—Performed annually on rated and non-rated trained aircrew. This is a retention-type of health screen, meets the annual PHA requirement, and is performed during the interim years between comprehensive FDMes. It is generally valid for 12 months and is synchronized to expire at the end of the aircrew member's birth month.

Aeromedical Standards Class or Physical "Class:" Flight physicals are typically referred to by the specific "class" or more accurately, by the aeromedical standards classification that apply to an aircrew member. The type of duties performed by the aircrew member as well as whether he is an applicant or a trained crewmember determines the applicable standards. These aeromedical standards are analogous to the accession and retention standards found in chapters 2 and 4 of AR 40-501, Standards of Medical Fitness, applicable to all Army soldiers. Chapter 4 of this regulation addresses aeromedical standards while chapter 6 addresses the administrative management. The following is a brief description of the classes of aeromedical standards and examples of aircrew members of that class.

CLASS 1 (FORMERLY 1W/1A)

Class 1 comprises the initial entrance (accession) physical examination standards for pilot applicants, formerly differentiated as warrant officer candidates (1W) and commissioned officer candidates (1A). Physical examinations performed for this purpose are always **initial** FDMes and are valid for up to 18 months from date of examination. If the Class 1 exam expires or is about to expire prior to reporting date, the applicant must repeat, submit, and have on record a qualified Class 1 physical. These are centrally reviewed and given final disposition by USAAMA.

CLASS 2

Class 2 comprises all rated aviators (pilots) as well as flight surgeons (FSs), aeromedical physician assistants (APAs), and aeromedical nurse practitioners (AMNPs). These are centrally reviewed and given final disposition by USAAMA.

Notes: 1) AMEs and civilian aeromedical providers do not require a Class 2 flight physical (see below) and **2)** Contract civilian pilots may opt to certify with FAA Class 2 annuals. Class 2 can be further broken down as follows:

1. **Initial Class 2:** Accession standards for FS, APA, and ANP as well as all rated Class 2 aircrew that have had a 5 or more year break in aviation service and are now returning to aviation service. Valid for up to 18 months.
2. **Comprehensive Class 2:** FDME standards applied to rated (trained) pilots and FSs. This also applies to APAs and AMNPs (though these are technically "non-rated") and flight students once in flight training (though not yet rated). A flight student's status changes from class 1 to class 2 at the start of the initial flight training course leading to award of an aeronautical rating, per AR 600-105, Aviation Service of Rated Army Officers, paragraph 3-3 (a & b), December, 1994, and AR 40-501, Standards of Medical Fitness, paragraph 4-2 (b)(1), December, 2007. This realistically is started at taking the aircraft controls. A comprehensive FDME is generally valid for a period of 12 months; exceptions will be discussed in subsequent sections.
3. **Interim Class 2:** FDHS standards applied to rated (trained) pilots and FS/APA/AMNPs. The FDHS is done in the years that a comprehensive FDME is not required. The annual FDHS is generally valid for a period of 12 months.

CLASS 3

Class 3 encompasses all other non-rated crewmembers and other personnel required by competent authority to fly in Army aircraft. This includes flight medics, aeromedical psychologists, flight engineers, crew chiefs, stewards, and Unmanned Aircraft Systems (UAS) operators. Most class 3 physicals and AMSs are handled and managed at the local flight surgeon with the local commander level as the approving authority, with few specific cases that must be forwarded to USAAMA for review and disposition. Class 3 physicals and AMS should be entered in AERO to allow adding and storing individual and population data for the AEDR and future providers to reference. Note: contract civilian crewmembers may opt to certify with FAA Class 3. Class 3 can be further broken down as follows:

1. **Initial Class 3:** Accession standards for non-rated aircrew. Valid for up to 18 months.
2. **Comprehensive Class 3:** Retention standards for non-rated aircrew. An annual FDME is generally valid for a period of 12 months; exceptions will be discussed in subsequent sections.
3. **Interim Class 3:** Retention standards for non-rated aircrew. An annual FDHS is generally valid for a period of 12 months, and is done in the years that a comprehensive FDME is not required.

CLASS 4—MILITARY

These standards are applied to military air traffic services (controllers) (ATC). These are centrally reviewed and given final disposition by USAAMA. Class 4 can be broken down further.

1. **Initial Class 4:** Accession standards for all ATC. Valid for up to 18 months.
2. **Annual Class 4:** Retention standards for all ATC. A comprehensive FDME is generally valid for a period of 12 months; exceptions will be discussed in subsequent sections.
3. **Interim Class 4:** Retention standards for all ATC. A comprehensive FDHS is generally valid for a period of 12 months, and is done in the years that a comprehensive FDME is not required.

1. Current Operating Manual for Qualification Standards for General Schedule Positions Office of Personnel Management (OPM) standards address both application and retention for ATCs, found at <http://www.opm.gov/qualifications/index.htm>. While the standards may appear outside the norms of standard care, remember they are occupational standards. Paragraph F, and specifically subparagraph (3), provides the verbiage to raise issue and concern when reviewing or discovering medical issues that are potentially hazardous, warranting waiver consideration. **Note:** OPM standards do not outline any process for managing standards failure or medical conditions, and thus refer back to AR 40-501 and the Aeromedical Policy Letters for the evaluation, management, and annual requirements of medical conditions for waiver consideration.
2. The Class 4 FDME requirements, as outlined in paragraph 4-33 (c) of AR 40-501 will be used as the basis for conducting annual FDMEs for DAC and civilian contract ATC personnel. OPM standards apply for these individuals. Refer to the Aeromedical Technical Bulletin below on the conduct of these examinations. Note: IAW AR 40-400 completion of the flight physical rests with the individual patient and the local flight surgeon, and while MTFs may provide the basic portion of the physical, additional requirements, and in particular payment (such as labs, X-rays, consultations, evaluations, procedures, and/or follow-on care) are the responsibility of the individual patient.
3. Aeromedical Summaries and waiver requests for those conditions not meeting current OPM application or retention standards for DAC/civilian ATCs will be processed per current USAAMA policy and the APLs. Review of cases involving DAC or civilian contract ATCs are generally favorable and will include consideration of safety as well as the likelihood of deployment to austere environments or stationing away from regular medical care.

Types of Flight Physicals—the Bigger Picture

Previously, FDMEs have been broken into Initial and Comprehensive. In essence, the initial FDME is a comprehensive FDME **plus** a few extra items. In the recent past, comprehensive FDMEs were done every 3 years, but review and analysis suggested this was not necessary to ensure aeromedical fitness for flying duty. Comprehensive FDMEs are completed every 5 years between the ages of 20 and 50 (years ending in “0” and “5” as soon as practicable after beginning flight training) and then annually starting at age 50. In between comprehensive FDMEs, we obtain an interim (or abbreviated) Flying Duty Health Screen. Example: if an aviator had his Initial/Rucker FDME at 24 and finishes training at 26, then the next Comprehensive should be at age 30.

The checklist below (table 2 through 7) provides a simple “go-by” to determine what is required on an FDME- initial or comprehensive and the requirements for the FDHS. This same information is presented in tabular form below.

The initial and comprehensive FDMEs are performed on DD Forms 2807-1 and 2808, much the same way as any Army quadrennial physical exam. The interim (or abbreviated) Flying Duty Health Screen is performed on the DA Form 4497-R, a simple one-page document that is **not** intended to be a full history and physical. It is simply a **health screening** to assess some of the more relevant health indicators in our aircrew, and allow each aircrew member an annual visit with their health care provider. These with the DD Form 2807-1 and required USPSTF age-specific counseling/screening meet the requirement for annual PHA and may be documented in AERO. AERO will be updated to insure completion of annual DD Form 2807-1 occurs.

Initial FDME

The contents are essentially the same for all initial FDMEs for class 2, 3, and 4. The only difference here is that a class 1 initial requires anthropometric measurements and cycloplegic refraction while a class 2, 3, and 4 do not. For FS/APA/AMNP, anthropometric measurements are not required but encouraged. AERO provides standards check for completeness.

Comprehensive FDME

The contents are the same for all comprehensive FDMEs regardless of class (2, 3, or 4). The FDME captures the same information on all aircrew under similar circumstances.

- Performed every five years between the ages of 20 and 50 (years ending in “0” and “5” as soon as practicable after beginning flight training) and then annually thereafter.
- Additionally, a comprehensive FDME is required when requesting return to aviation service after medical termination, following aircraft accidents (Class A and B), and for retirement purposes.
- Recall to aviation service requires a comprehensive initial FDME, unless the individual is returning to service within 5 years of their last qualified comprehensive FDME. In this case only an interim FDHS is required.

Interim or Abbreviated (Short) FDHS (Flying Duty Health Screen)

Performed during the interim years when comprehensive or initial exams are not required. For example, a crewmember will receive a comprehensive FDME for his 30th birthday and an interim FDHS on his 29th and 31st, 32nd, 33rd, and 34th birthdays. All FDHSs are the same regardless of class (2, 3, or 4).

Birth Month Window

FDME/FDHS are synchronized with the birth month. Army regulations allow for a generous birth month window that encompasses the “three-month period preceding the end of the birth month.” It includes the birth month **plus** the two previous months. All exams taken within this period are considered to have been taken within the birth month and will be good to the end of the birth month of the following year. When operationally required to complete FDME/FDHS prior to entering the birth month window, contact USAAMA for guidance and approval.

Example: A soldier born in July may begin his FDME/FDHS 3 months prior to 31 July. That means he/she can start the process on 1 May and must complete it no later than 31 July. By the same token, if he/she completes it in May it will still be valid until the last day of July in the following year. All exams taken within this period comply with meeting the requirement.

Birth Month Realignment

Just as the type of physical (comprehensive or interim) is aligned with a crewmember’s age, his physical is aligned with his/her birth month. The physical is completed in conjunction with the birth month (in the three-month window) and it is valid until the last day of the birth month the following year. Sometimes, a crewmember may get a physical outside of his birth month window. The initial FDME is done without regard to the birth month—it is performed when it is needed for application to aviation service. Another example is deployment that can impact and upset the birth month cycle. Other examples include FDMEs performed for permanent medical suspension, FEB, or in conjunction with an accident investigation—all of these can disrupt the birth month cycle.

In these cases, we strive to realign the crewmember with his birth month AND avoid performing excessively frequent FDMEs/FDHSs. In these cases, Table 1 on page 7 may be used. This table provides you with the maximum period of validity for a physical in order to realign the crewmember with his birth month. To avoid confusion with the flight records section, the FS **MUST** clearly document the “birth month realignment” in the remarks block of the DA Form 4186, “upslip”. Otherwise, the flight records sections may ask questions as to why the upslip was valid for longer than 12 months.

Example: A crewmember has a July birth month, but he just had an FDME post-mishap in February, the flight surgeon can extend that validity of clearance until July of the following year instead of performing another FDME/FDHS in five months. In this example, the FDME will have a period of validity of 17 months (remember, the maximum allowed is 18 months).

NOTE: This has nothing to do with extensions beyond the end of the birth month. That topic follows next. The FDME/FDHS **must** be completed prior to the end of the birth month in which it is due.

Extensions

If the FDME/FDHS cannot be performed prior to the end of the birth month, the aviator may request and the flight surgeon may grant a **one** calendar month extension (to the last day of the following month). An extension must be requested in the birth month prior to the end of the birth month. Any extensions requested and granted in the month after the birth month are not valid. The effective date of the extension is the day it was requested.

Example: the soldier born in July fails to complete the FDME/FDHS before 31 July. The flight surgeon may grant an extension and upslip to cover him through 31 August. Back-to-back extensions or extensions exceeding one calendar month are not authorized. If on 31 August this crewmember still has not initiated his FDME/FDHS, he must be grounded. The only exception to this policy is per special policy directive from the Surgeon General’s office.

TIP: If the aviator completed the FDME/FDHS in time, but more assessment or testing is required (such as Failed Level 1 CVSP needing an AGXT and there is a 30-day or more wait for scheduling), the flight surgeon may if aeromedically appropriately complete the DA 4186, checking the “MEDICAL EXAMINATION” and “OTHER” blocks, recommending in the REMARKS section, “Continue FFD for (30, 60, or 90) days until evaluation complete”—the medical exam has been accomplished, but is not finished. This keeps the aircrew engaged and tracked to get the FDME/FDHS completed. Avoid giving the blanket full year upslip with the expectation that everything will be completed anyway—out of sight, out of mind occurs too often and completing the physical is forgotten. Subsequent physicals filed may be returned as “disqualified, incomplete.”

Civilian Aeromedical Providers and AMEs Physicals

While civilian aeromedical providers and AMEs are not required to maintain a current Class 2 flight physical, all are encouraged to do an initial Class 2F/2P flight physical in preparation for attending the US Army Flight Surgeon Primary Course. After training, all are encouraged to continue with annual FDME/FDHSs as a mechanism of maintaining health as well as to monitor, evaluate, and improve the physical exam process for their aviation population. These physicals may be submitted in AERO—make certain the remarks section annotate civilian or AME status.

Table 1: Birth-month Realignment Table

Number of months for which a flight physical is valid:

<i>Birth</i>	<i>Month in which the Flight Physical was given</i>											
<i>Month</i>	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Jan	12	11	10	9	8	7	18	17	16	15	14	13
Feb	13	12	11	10	9	8	7	18	17	16	15	14
Mar	14	13	12	11	10	9	8	7	18	17	16	15
Apr	15	14	13	12	11	10	9	8	7	18	17	16
May	16	15	14	13	12	11	10	9	8	7	18	17
Jun	17	16	15	14	13	12	11	10	9	8	7	18
Jul	18	17	16	15	14	13	12	11	10	9	8	7
Aug	7	18	17	16	15	14	13	12	11	10	9	8
Sep	8	7	18	17	16	15	14	13	12	11	10	9
Oct	9	8	7	18	17	16	15	14	13	12	11	10
Nov	10	9	8	7	18	17	16	15	14	13	12	11
Dec	11	10	9	8	7	18	17	16	15	14	13	12

Note: Read down the left column to the examinee's birth month; read across to month of the physical completed; intersection number is the maximum validity period.

Internal Summary—The Army Flight Physical, Key Points

1. The period of validity for all physicals is determined by only one thing—if it is an initial physical or a periodic physical (comprehensive or abbreviated). Regardless of class (1, 2, 3, or 4), all initial FDMEs are valid for up to 18 months, and all periodic physicals are valid for 12 months.
2. All FDMEs/FDHSs should be completed within the birth month window.
3. All periodic FDMEs/FDHSs are valid until the last day of the birth month in the following year.
4. The period of validity of a periodic FDME/FDHS may be extended up to 18 months in order to realign a crewmember with his birth month.
5. An extension for one calendar month beyond the birth month is possible. NO MORE than that—if needed, then identify and solve the underlying management issue.

COMPLETING THE FLIGHT PHYSICAL PAPERWORK

To ensure a FDME/FDHS is completed properly, use AERO and the checklists during completion of the FDME/FDHS and review. The next pages provide checklists for all physicals (tables 2 through 7). Physicals are commonly broken down into two parts—Part 1, the setup, and Part 2, the FS/APA/AMNP/AME exam. This is an artificial break to allow time for the labs, vision, hearing, and paperwork to be completed and resulted, but **not** required. It is employed at most Army clinics—some places have the ability to get it all done without delay. The checklists are an aid for the aviation medicine clinic staff in completing “PART 1” of the physical. With the few requirements for the FDHS, both parts can easily be completed the same day. Be sensitive to the needs of you crewmembers and if necessary, conduct the *entire* physical on the same day (Part 1 in the morning, Part 2 in the afternoon).

Part 1

Part 1 of a physical consists of compiling all the information/data required on the DD Form 2807-1 and DD Form 2808 or DA Form 4497-R. It covers:

- Personal information
- Past medical history
- Vital signs/Anthropometrics
- Vision testing
- Audiology
- ECG (Only required on initial FDMEs and then annually after age 40 as part of Cardiovascular screening program.)
- Dental
- Pap result (Not required on Initial FDMEs)
- Required Labs
- Review and completion of any annual waiver or information requirements
- Creation and data entry into AERO

Part 2

Part 2 is the FS/APA/AMNP/AME “hands-on” part of the physical. Ideally, all the data collected in Part 1 is in AERO and available for review when the patient returns for Part 2. This way, the physical exam may be completed and submitted in AERO. In addition, this is the time to address PHA/preventive health measures and key areas of medical history, such as cardiovascular risk factor reduction and use of dietary supplement/herbals or OTC products. Detailed guidance for the completion of the examination portion of DD Form 2808 can be found in AR 40-501, and in the applicable ATBs below, which include information for the completion of additional aviation specific tests: vision tests, valsalva, reading aloud test, and anthropometrics.

FDME/FDHS Checklists

Notice that the checklists have several features to ensure accuracy and completeness. There is no requirement to use these checklists—it is furnished as an aid for clinic operations. AERO is in sync with the checklists, except for OPM standards. Some issues to consider:

1. DOB and “age for this exam” are noted at the very top. This will help you determine:

- Does he/she require a comprehensive or interim exam?
- Is the patient over 40? (triggers over-40 requirements)

Remember that when a crewmember reports for his comprehensive FDME, this is usually reporting one or two months prior to the birth month. In determining the type of physical (comprehensive or abbreviated), annotate the age for the upcoming birthday. Example: a crewmember is 38 today but will be 39 next month. Use 39 as the “age for this exam”.

2. Aviation requirements for HIV testing are required with the comprehensive FDME every five years. Remember that for Army Force Protection requirements, HIV testing is required every two years. This should be done, but it only requires reporting on the comprehensive FDME.
3. Good telephone, address, and email points of contact are noted in order to facilitate contact with the patient.
4. Notice there are only three types of physical exams regardless of the class.
 - Initial
 - Comprehensive
 - Interim (Abbreviated)

Note: There are subtle differences between a class 1 initial and a class 3 initial FDME—those differences are annotated in the table 3. Keep it simple—there are only three types of physicals. Select the applicable column and ensure all items in the column are completed.

5. There are two additional sections that are age dependent and may be applicable. If they are, ensure they are completed. These sections are listed immediately following the three main columns. They are required for all types of physicals (initial, comprehensive and abbreviated).

- Over 40
- Retirement/Separation

6. The last section allows the administrative staff to note any additional tests or studies that may be required (for information only or waiver requirements). The easiest way to determine this is to check AERO as well as ask the patient. If the aircrew member has a waiver, a copy should be kept in the Health Record (HREC). Additionally, there should be a copy of the Aviation Epidemiology Data Registry (AEDR) printout attached to the last qualified physical in the HREC or this information is available via AERO query. The AEDR printout will also mention if any waivers are in effect and if any additional tests or studies are required beyond those listed in the APLs. If any additional tests or studies are required, the clinic staff should order them now to ensure the results are back in time for “Part 2.” If there are any questions reference additional requirements, the clinic staff shall address them with the flight surgeon/APA during “Part 1.” Tables 3 and 4 provide a consolidated list of physical requirements by type.

The Required Forms—these are available in AERO

Initial and Comprehensive FDME: Performed on the same DD Form 2807-1 and DD Form 2808 (dated July 2001) on which other military physicals are performed. When the crewmember shows up for Part 1 of his FDME, he/she should fill out all the demographic data either on paper and/or directly to AERO. All entries (dental, optometry, etc.) should be annotated either electronically or manually. Submission to USAAMA when completed should be done via AERO.

Interim FDHS/Flying Duty Health Screen: Performed on DA Form 4497-R (March 2002) and/or entered electronically via AERO. PHA requires completion of the DD Form 2807-1. Submission to USAAMA should be done via AERO.

NOTE: Either both the DD Form 2807-1 and DD Form 2808, or the DA Form 4497-R, whichever is submitted to meet requirements, must be reviewed and signed either electronically in AERO or manually. ECGs with abnormal readings may be requested by USAAMA but remember to code the interpretation on the AERO FDME/FDHS.

Table 2: Summary of Requirements for FDME/FDHS (13 JAN 2008)

Home Phone () Work Phone ()		DOB:	Age for this exam:	*HIV Req.? YES / NO	Date:
Class 1 and All Initial Class 2, 3 and 4		Comprehensive FDME: every 5 years between the ages of 20 and 50 ("0's" and "5's") and then annually thereafter		FDHS	
DD Form 2807-1 completion Vital signs _____ BP, Pulse, Ht, Wt, Waist Circ (in cm) Anthros (Class 1 only) Vision _____ <input type="checkbox"/> VAs, Phorias by AFVTA, Cover-uncover test (tropias), Cross-cover test (phorias), NPC, IOPs, Color vision, Stereopsis/Depth Perception, Visual fields, Night vision Hx <input type="checkbox"/> Refraction <input checked="" type="checkbox"/> Cycloplegic (Class 1 only) <input checked="" type="checkbox"/> Manifest (Eyeglass Rx) (All classes if uncorrected worse than 20/20 ⁻¹) Audio _____ ECG _____ Dental _____		DD Form 2807-1 Completion Vital signs _____ BP, Pulse, Ht, Wt, Waist Circ (in cm) Vision _____ <input type="checkbox"/> VAs, Phorias by AFVTA, Stereopsis/Depth Perception, Color vision <input type="checkbox"/> Manifest Refraction / Eyeglass Rx (All classes if uncorrected worse than 20/20 ⁻¹) Audio _____ Dental _____ Pap & Pelvic _____ (Gyn Report accepted)		DD Form 2807-1 Completion Vital signs _____ BP, Pulse, Ht, Wt, Waist Circ (in cm) Vision _____ <input type="checkbox"/> VAs, Stereopsis/Depth Perception <input type="checkbox"/> Manifest Refraction / Eyeglass Rx (All classes if uncorrected worse than 20/20 ⁻¹) Audio _____ ECG not required unless clinically indicated or required by waiver or age 40 or over Dental _____ Pap & Pelvic _____ (Gyn Report accepted)	
Labs <input type="checkbox"/> UA w/ microscopic, HCT, HIV, FBS, Sickledex (excluding class 4 and UAS) , Chol, HDL, Trig, LDL		Labs <input type="checkbox"/> *HIV, UA w/ microscopic, HCT, Chol, HDL, LDL, Trig, FBS		Labs <input type="checkbox"/> None unless clinically indicated or per waiver requirements or over 40	
Notes: <input type="checkbox"/> RAT and AA (ARMA) <input type="checkbox"/> Valsalva <input type="checkbox"/> Refractive Surgery-see APL <input type="checkbox"/> Contact Lens Wear- see APL <input type="checkbox"/> Rectal & guaiac (Rectal by inspection to age 39. DRE/stool guaiac/Prostate required at age 40 and over)		Notes: SEE BELOW FOR 40 & older <input type="checkbox"/> Annual PHA		Notes: <input type="checkbox"/> "Health Screening" / Directed Physical Exam / Annual PHA <input type="checkbox"/> Dental and Pap/Pelvic are recommended for health promotion but are not required FDHS entries	
Age 40 and over (for all classes; initial /comprehensive FDME and FDHS), add: <input type="checkbox"/> Fasting Blood Sugar, Lipids <input type="checkbox"/> CVSP (Cardiac Risk Index calculated by AERO) <input type="checkbox"/> Rectal and Stool guaiac on comprehensives only <input type="checkbox"/> Prostate and PSA (Males- on comprehensive examinations only) <input type="checkbox"/> Mammogram: 40,42, 44,46,48,50, then yearly (required for all AD females) <input type="checkbox"/> IOPs <input type="checkbox"/> EKG				Retirement: <input type="checkbox"/> Perform a comprehensive FDME <input type="checkbox"/> CXR if age 40 or over <input type="checkbox"/> DD Form 2697 <input type="checkbox"/> Counseling on Hepatitis C screening NOTE: Must be a comprehensive exam	
Additional tests, studies and consults for Waivers and Information Only Conditions: see APLs Class 1 and Avn SERE: #40, DD Form 2808, Statement Remarks: "Not afraid of dark spaces or confined places" Annual PHA: requires DD Form 2807-1, review and counseling documented for age-specific requirements					
Last name First MI Rank				Provider's Stamp	
				Status	

Table 3: Summary of DD Form 2808, Jul 2001

	Class 1 and Class 2/3/4 Initial	Class 2/3/4 Comprehensive
1-16. Admin Data	Y	Y
17-44. Clinical Exam	Y	Y
Dental	Y	Y
Valsalva	Y(1)	N
Digital Rectal	Y (By Inspection, DRE \geq age 40)	Y (By Inspection, then DRE \geq age 40)
Stool Guaiac	(2)	(2)
45a. Urine Albumin	Y	Y
45b. Urine Glucose	Y	Y
47. Hematocrit or Hb	Y	Y
49. HIV	Y Annotate date drawn	(3)(4), Force Protection Q2 years Annotate date drawn
52a. Pap smear	N	(3)
52c. Sickledex	Y(1)	N
53. Height	Y	Y
54. Weight	Y(10)	Y(10)
--Waist Measurement (in cm)	(7)(10)	(7)(10)
55. % Body Fat	N	N
57. Pulse	Y	Y
58a. Blood Pressure - Only one reading req.	Y	Y
60. Other vision: Cycloplegic Refraction (annotate procedure in block 73. Notes)	Class 1 Only	N
61. Distant Vision	Y	Y
62. Manifest Refraction	(6)	(6)
63. Near Vision	Y	Y
64. Heterophorias	Y	Y
Cover Test / Cross-cover	Y	N
Near Point Convergence	Y	N
66. Color Vision	Y	Y
67. Depth Perception	Y	Y
68. Field of Vision	Y	N
69. Night Vision History	Y	N
70. IOPs	Y	(2)(3)
71a. Audiometer	Y	Y
72a. Reading Aloud Test	Y	N
72b. Valsalva	(1)	N
73. Notes		
Additional Lab:		
Urine Micro (WBC, RBC)	Y(9)	Y(9)
Total Cholesterol	Y	Y
HDL, LDL, Triglycerides	Y	Y
PSA	N (Unless >40 Y/O)	(2)
CAD Risk Index	N (Unless >40 Y/O)	(2)
Fasting Glucose	Y	(2)(3)

	Class 1 and Class 2/3/4 Initial	Class 2/3/4 Comprehensive
73. Notes (cont.)		
ECG	Y	(2)
CXR	N	(3)
Anthropometrics	Class 1	N
Aeronautical Adaptability (formerly known as ARMA)	Y	N
Cycloplegic Protocol	Class 1 Only	N
74a. Qualification	Y	Y
77. Summary of Defects	Y	Y
78. Recommendations	Y	Y
81a-84b. Examiner names and signatures	Y	Y

Notes:

- (1) Not required for Class 4 (Air Traffic Control) or UAS operators.
- (2) Required age 40 and older.
- (3) Required if medically indicated or required by the U.S. Army PrevMed program.
- (4) HIV testing in civilian aircrew members is voluntary, not required.
- (5) Required when weight exceeds AR 600-9 weight tables.
- (6) Required if unaided near/distant vision is not 20/20⁻¹.
- (7) Required as per APL "Cardiovascular Screening Program" and/or "Metabolic Syndrome."
- (8) Recommended annually, report of exam required only on comprehensive FDME.
- (9) Urinalysis Dipstick Results of ALL Negative for Blood, Nitrite, and Leukocyte Esterase are acceptable for RBC and WBC NEG annotations. Microscopic evaluation is not required.
- (10) If calculated BMI >29.9, waist circumference (in cm) required. Annotate in AERO, page 4, or in remarks section.

Table 4: Summary of DA Form 4497-R, Mar 2002(1)

	Class 2, 3, and 4 Interim FDHS
1-14b. Admin Data	Y
15. Blood Pressure	Y
16. Pulse	Y
17. Height	Y
18. Weight	Y(9)
--Waist Measurement (in cm)	(7)(9)
20a. Depth Perception Test	Y
20b. Test Score	Y
20c. Test Result	Y
21a. Distant Visual Acuity 21b. Near Visual Acuity (document manifest refraction if vision requires correction to achieve 20/20 ⁻¹)	Y(6) Y(6)
22. Intraocular Pressure	Y (2)(3)
23. Audiometry Screening	Y
24. History and Physical	DD2807-1 and focused physical as req'd
Rectal Exam	(3)
Stool Guaiac	(3)
Pelvic / Pap	(3)
HIV	(3)(4) Force Protection = Q2 years Annotate date drawn
Fasting Glucose	(2)(3)
Total Cholesterol	(2) (3)(7)
HDL, LDL	(2)(7)
Triglycerides	(2)(7)
CAD Risk Index	(2)(7)
25. ECG	(2)(3)(7)
26. Recommendation	Y
27. APA name and signature	Y
28. FS name and signature	Y

Notes:

- (1) Not required for Civilian or Contract Class 4 (Air Traffic Control).
- (2) Required age 40 and older.
- (3) Required if medically indicated or required by the U.S. Army PrevMed program.
- (4) HIV testing in civilian aircrew members is voluntary, not required.
- (5) Required when weight exceeds AR 600-9 weight tables.
- (6) Required if unaided near/distant vision is not 20/20 or better.
- (7) Required as per APL "Cardiovascular Screening Program" and/or "Metabolic Syndrome."
- (8) Recommended Annually, report only required on comprehensive FDME
- (9) If calculated BMI >29.9, waist circumference (in cm) required. Annotate in AERO DA 4497-R, or remarks section.

***A dental exam is not required on this exam but it is still required for medical force readiness. -- don't forget to have all soldiers complete their birthmonth exam!

Table 5: Summary of Aeromedical Standards—Vision, Hearing, Labs, Anthropometrics (13 JAN 08)

Aeromedical Vision Standards						
Cycloplegic Refraction Standards		Visual Acuity, DQ if worse than:		Phorias, DQ if:		
Class	[<i>Qualified</i>]	Distant	Near	Eso	Exo	Hyper
1	Sphere: DQ < -1.50 to +3.00 < DQ Cyl: DQ < -1.0 to +1.0 < DQ	20/50	20/20 ⁻¹	>8	>8	>1
2/3/4	NOT REQUIRED	20/400	20/400	>8	>8	>1

Class	Cover-Uncover Test	Cross-Cover Test	NPC DQ if:	Color Vision DQ if:
1 and 2/2F/3/4 Initial	Any detectable movement referred to optometry	Any detectable movement referred to optometry	>100 mm	PIP: 3 or more errors out of 14 plates, and/or failing the PIP2 or F2 single plate --AND-- FALANT: any errors out of 9 presentations
2/3/4 Other	Not Req	Not Req	Not Req	Req for FDMEs—standards above

All Classes of Aeromedical Standards	
Field of Vision, DQ if:	Any Defects
Depth Perception, DQ if:	>40 seconds of arc at 20 feet: <ul style="list-style-type: none"> Any error in block B of the AFVT or OPTEC 2300, or Any error in lines 1 through 9 for Titmus II, or Any errors in lines 1 through 7 of the 10 levels for Randot Circles test
IOP, DQ if:	<8 or >21 mmHg in either eye or, 4 or more mmHg difference between eyes If <8 and due to PRK/LASIK, so state on FDME/FDHS

Aeromedical Audiology Standards						
Qualified if Equal or Better than:						
Class	500Hz	1000Hz	2000Hz	3000Hz	4000Hz	6000Hz
1	25 dB	25 dB	25 dB	35 dB	45 dB	45 (see APL)
2/3/4	25 dB	25 dB	25 dB	35 dB	55 dB	65 (see APL)

Laboratory Normal Values, All Classes					
HCT/Hb	Male 40% - 52% (14-18 gm/dl)			Female 37% - 47% (12-16 gm/dl)	
UA Dipstick	Gluc Neg	Prot Neg	Micro / Dipstick	<5 RBC / Neg	<5WBC / Neg

Category	<i>Fasting Blood Sugar</i>	<i>2-Hour Post-Prandial</i>
Normal	<110	<140 (HbA1C < 7.0)
Impaired Glucose Tolerance	110 < FBS < 126	140 < 2HPP < 200
Diabetes Mellitus	>126	>200
Gestational Diabetes Mellitus	>105	>165

Anthropometric Standards Class 1/2 (optional for other classes) Qualified if:	
Total Arm Span, (TAS)	Greater than or equal to 164cm
Crotch Height, (CH)	Greater than or equal to 75cm
Sitting Height, (SH)	Less than or equal to 95cm for career transition to OH58 / TH67 Less than or equal to 102cm for all others

Note: Blood Pressure less than 140/90 (regardless of age or flight class) with exception for Class 4 OPM standards. For OPM Standards and requirements, see ATB below and Table 8.

Table 6. CORNEAL REFRACTIVE SURGERY INFORMATION REQUIRED by USAAMA for determination of Flight Qualification (30 APR 2007)

Flight Applicant

Last name: _____ First name: _____ Middle initial: _____

Date of Birth _____ Contact Tel. # _____

1. Procedure: Date of Procedure: _____ **Type (circle one) PRK LASIX LASIK**

2. Pre-operative Refraction

OD: _____ OS: _____

3. Post Operative Follow-up Examination (>6 weeks post-op when returning to flight)

Last /Current Exam Date	Visual Acuity (Distant)	Visual Acuity (Near)	Slit Lamp Exam for HAZE (0= no haze, 1= trace, 2=minimal, 3= moderate, 4= iris obscured) Note: Only "0" (no haze) is passing.
	OD _____ OS _____	OD _____ OS _____	OD : 0 1 2 3 4 OS : 0 1 2 3 4

4. Corneal topography, post operative: copy available ____ Date ____ Acceptable ____

5. Contrast Sensitivity (post operative)

☐ Contrast Sensitivity Testing done, Date ____ Results:

OD: _____ (Std is 20/60 or better each eye)

OS: _____ (Std is 20/60 or better each eye)

(or)

☐ Contrast Sensitivity testing is not readily available; Applicant denies difficulty with night vision to include increased glare, halos, starbursts, or other visual distortions.

Class 1A/1W Applicants (Required ONLY IF the Refractive Surgery was done AFTER the FDME vision/cyclo testing)

1. Post-operative, Cycloplegic refraction

Cycloplegic Refraction

OD _____

OS _____

2. Post-operative, Pass of Class I vision standards:

Distant Vision

Right 20/_____ Corr to 20/_____ Near Vision 20/_____ Corr to 20/_____

Left 20/_____ Corr to 20/_____ 20/_____ Corr to 20/_____

3. Post-operative: Intraocular Tension O.D. _____ O.S. _____

AAMA: Attn AAMA staff: FAX 334-255-7030, 7606 (DSN 558) Phone 334-244-7430 (DSN 558)

Table 7. ARMY ANTHROPOMETRIC STANDARDS FOR ENTRY PILOT TRAINING

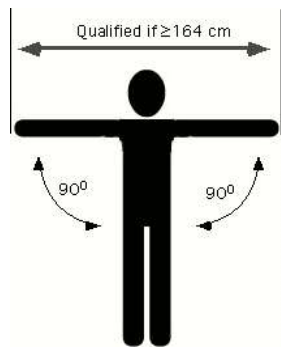
Crotch Height (Leg Length) - The subject must stand completely erect against a wall, heels together, weight evenly distributed, and knees locked. The measurement is taken parallel with the wall from the floor to a point where light contact is made with the perineum in the midline.

Total Arm Reach - The subject must stand erect against a wall, arms outstretched at a 90 degree angle and parallel with the wall. The elbows must be locked. The fingertips of one hand must be in contact with the adjacent wall in the corner of the room. The horizontal distance between fingertips is recorded.

Sitting Height - The subject must sit on a hard, flat surface, facing forward, feet flat on the floor, with buttocks, shoulders, and back of head against the wall. Using a right angle on the head, the distance between the sitting surface and the top of the head is recorded in centimeters.

<u>Measurement</u>	<u>Class 1/1A, RW/RO</u> <i>Qualified if:</i>	<u>OH-58 Pilot or Aeroscout</u> - <i>Qualified if</i>
CROTCH HEIGHT	≥ 75.0 cm.	≥ 75.0 cm.
TOTAL ARM REACH	≥ 164.0 cm.	≥ 164.0 cm.
SITTING HEIGHT	≤ 102.0 cm.	≤ 95.0 cm.

Anthropometric Diagrams

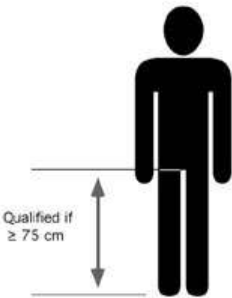
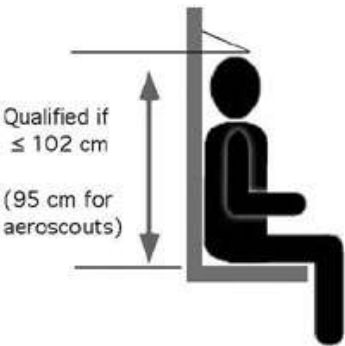


TOTAL ARM REACH (TAR)—The aviator candidate must stand erect against a wall, arms outstretched at a 90 degree angle and parallel with the wall. The elbows must be locked with the fingertips of one hand in contact with the adjacent wall in a corner of that room. The horizontal distance between fingertips is recorded in centimeters.

TAR _____ cm (std ≥164 cm)

SITTING HEIGHT (SH)—The aviator candidate must sit on a hard flat surface, facing outward, feet flat on the floor, with the buttocks, shoulders, and back of head against the wall. Using a straight angle ruler on the head, the distance between the sitting surface and the top of the head is recorded in centimeters.

SH _____ cm (std ≤ 102.0 cm)



CROTCH HEIGHT (CH)—The aviator candidate must stand completely erect against a wall in bare feet, heels together, weight evenly distributed, and knees locked. The measurement is taken parallel with the wall from the floor to a point where light contact is made with the perineum in the midline. Results are recorded in centimeters.

CH _____ cm (std > 75 cm)

X _____
Signature/Date of Examiner

If out of standards, see Anthropometric APL.

If TAR < 159, must have in-cockpit evaluation at Fort Rucker, Current POC: DAC Tony Keener, 334-255-3259 (DSN 558)

Special Tests—Aviation Unique

The flight physical is conducted just like any other physical exam. The procedure is the same. There are a few items that are commonly checked on the flight physical that most physicians are unfamiliar with because they are unique.. Some of these items may be performed somewhat differently between the various military services and the FAA. These tests and procedure instructions are written in the form of Technical Bulletins that follow and include:

- The Valsalva Maneuver—see the ATB for details on performance
- Reading Aloud Test—see the ATB for details on performance
- Anthropometrics—see the ATB for details on performance
- Cycloplegic Refraction—see the ATB for details on performance
- Color Vision Testing—see the ATB for details on performance
- Binocular Depth Perception—see the ATB for details on performance
- Aeronautical Adaptability—see the APL for details on performance
- Aeromedical Graded Exercise Tolerance (AGXT) Test—see the ATB for details on performance
- Class 4 Civilian OPM Standards and Requirements—see the ATB for details on performance

Aeromedical Adaptability (AA)

It is easier to explain what Aeromedical Adaptability is *not* than it is to explain what it is. An unsatisfactory AA is not a DSM IV diagnosis. AA covers sociobehavioral factors considered potentially unsuitable for adapting to military aviation, both medical and non-medical. It is behavior that may be caused by underlying, undiagnosed psychiatric disorder, or traits, that often do not meet full DSM-IV criteria, but it is not limited to this. There is no diagnostic test or battery of questions to determine whether the aviator is AA Satisfactory (SAT) or Unsatisfactory (UNSAT). Aeromedical Adaptability is covered in AR 40-501, paragraph 4-29.

UNSAT AA is a consensus of opinion developed after a thorough investigation determines that a certain behavior or conduct is unadaptable or unsuitable for Army aviation—it may be a fear or trust issue, a breakdown in effective crew coordination, or personality traits adversely affecting mission execution and completion. This often will involve the flight surgeon(s), aviation chain of command (military) or supervisory chain (civilian), and often a psychologist/psychiatrist evaluation. Admittedly, this is not an exact science and often the case should be discussed with USAAMA prior to rendering the final determination. The issue in question may not be a medical issue, but rather, and more often, an administrative, command issue or a Flight Evaluation Board issue.

Before rendering an UNSAT AA, it is best to step back and review the reasons for making this determination. Was it a “bad” provider-patient interaction? Was it concealment of information (often from encouragement from others) due to fear of not being qualified for flight, but not knowing the policies and that the condition is amenable to an exception to policy or waiver? Is it other observations? USAAMA will often, but not always, request the following:

1. The patient undergo a psychological evaluation and testing to identify or eliminate an underlying psychological diagnosis or traits that may be concerning for aviation service.
2. Interview with another aeromedical provider.
3. Memorandum from command in trained aircrew.

An UNSAT AA in an applicant is an automatic DQ. Fixing this, if in error, requires an aeromedical summary requesting the initial determination be overridden with the “new” information.

An UNSAT AA in a trained aircrew is a permanent suspension and shall have an aeromedical summary submitted for removal from future aviation duties. Again, repairing an incorrect determination requires an aeromedical summary request to override the previous determination with the “new” information.

AEROMEDICAL DISPOSITION

The FS/APA first makes the fitness for duty determination after careful examination and thoughtful application of current aeromedical standards and annotating such on the upslip (DA Form 4186). USAAMA reviews all rated aircrew and air traffic controller physicals and referred non-rated physicals, displaying its determination in AERO with 2-letter codes.

Medically Qualified (QU, QI (Qualified, Information Only)): Whenever a crewmember meets the aeromedical standards set forth in AR 40-501 and the Aeromedical Policy Letters (APLs).

Medically Disqualified (DQ, DI (Disqualified Incomplete)): Whenever a crewmember does not meet the medical standards set forth in AR 40-501, chapter 4 and the APLs or is not able to safely perform the duties required, the crewmember is said to be medically disqualified from aviation service. Incomplete physicals shall be identified for deficiencies and corrected with submission of additional information missing or an aeromedical summary per the APLs. Physicals that are submitted as “disqualified,” completed but with an identifiably disqualifying and non-waiverable condition, still require an AMS to terminate ACIP as well as alert HRC of unit manning/assignment issues.

Permanent Disqualification

When a medical condition that impairs the safe performance of aircrew duties is expected to last longer than 365 days or is specifically listed in AR 40-501, Chap. 4 or the APLs, it is termed as aeromedically permanently disqualifying. Examples include insulin-requiring diabetes, heart attack, HIV seropositivity, hypothyroidism, malignancies, or hypertension. These conditions are listed in AR 40-501 as being unfit for aviation service and are thereby disqualifying. Some of these conditions (e.g. hypothyroidism and hypertension) when properly treated will not present a danger to aviation safety and these crewmembers may apply to receive a waiver. Other conditions such as a heart attack, traumatic brain injury, or stroke will present a persistent danger to aviation safety and the aircrew member will usually not be granted a waiver. Permanent disqualifying conditions require a waiver in order for the aircrew to continue in aviation service. See waiver below.

Temporary Disqualification

Imposed for a condition that is not permanently disqualifying per the APLs or AR 40-501. It is expected to last less than 365 days prior to resolution. When the condition resolves, the crewmember is again considered qualified to perform aviation duties. Examples include the common cold, ankle sprain, minor back injuries, simple extremity fracture, and uncomplicated pregnancies. If however, the condition fails to resolve within 365 days and/or it continues to prevent the crewmember from safely performing his duties, the condition will be treated as a permanent disqualification (see above). Temporary disqualifications usually do not require waiver action.

Waiver (WR (Waiver recommended), WG (Waiver granted)): From most aeromedical summaries, USAAMA will recommend a waiver from the waiver authority. A document from the waiver authority (e.g. HRC, NGB, or DAC/contract officials) grants continued flight status in spite of a disqualifying defect. This document waives the requirement for the aviator to meet a specific medical standard and provides the annual waiver requirements to maintain the waiver specified. Medical recommends waivers—command grants the waiver.

Exception to Policy (ER(Exception recommended), EG(Exception granted)): A matter of semantics, waivers are not granted for Class 1 applicant standards. If a Class 1 applicant does not meet medical standards, he/she must receive an exception to policy prior to entering aviation service. An exception to policy is scrutinized more carefully though the process is the same as that for a waiver. As above, the waiver authority grants the exception.

More semantics: a Flight Student’s status changes from class 1 to class 2 at the start of the initial flight training course leading to award of an aeronautical rating. Flight students that are now Class 2 aviators require a waiver and not exception to policy.

Aeromedical Summary (AS): In order for an aircrew member to get a waiver or exception to policy, the flight surgeon performs a thorough medical evaluation of the condition and documents the evaluation in an Aeromedical Summary (AMS) IAW the APLs. Use AERO for AMS submission. The AMS process is detailed below and is similar in structure to a Narrative Summary. The FS submits the AMS along with his recommended aeromedical disposition (waiver/ETP recommended versus not recommended) to the Army Aeromedical Activity (AAMA). If a waiver/ETP recommendation is ultimately approved, the crewmember may continue on flight status or be medically cleared to assess to Flight Training. If not approved, the crewmember will be removed from flight status or flight training selection.

Medical Recommendation: The flight surgeon is a special staff officer on the commander’s staff. Like other staff officers, the flight surgeon is a subject matter expert who makes recommendations to the commander. The flight surgeon enjoys a position of special trust with the commander and typically, the commander approves the flight surgeon’s aeromedical recommendations. Technically, until the commander approves the flight surgeon’s recommendations, they are just recommendations and carry little weight.

Approval Authority: The commander is the approval authority. The goal is to determine *at what level of the command* this authority resides. When dealing with DA waiver (or exception to policy) recommendations, this is also known as the DA waiver authority. A comprehensive list of waiver authorities is listed in AR 40-501, chapter 6 and in Table 8 below.

FDME/FDHS Review and Disposition

Class 1, 2, and 4: All class 1, 2, and 4 FDME/FDHSs are submitted to USAAMA at Ft. Rucker for final review, and disposition (this includes all initial, comprehensive FDMEs and interim FDHSs). If not submitted via AERO, USAAMA input the FDME/FDHS into AERO to insure the FDME/FDHS is complete and that all parameters are within Army aeromedical standards. If it is complete and within standards, it will be stamped or coded as “Qualified” or “Qualified, Information Only.” If mailed to USAAMA, the FDME/FDHS will be returned to the originating clinic for inclusion in the health record. If using AERO, the FDME/FDHS form may be printed and placed in the HREC showing the electronic qualification. If the FDME/FDHS is missing required information or it has any parameters outside Army aeromedical standards it will be stamped or coded as “Disqualified Incomplete” or “Disqualified.” If mailed to USAAMA, the FDME/FDHS will be returned to the originating clinic with the AERO cover sheet of deficiencies for review to correct the defects, and resubmit the FDME/FDHS. If submitted via AERO, the deficiencies are available online, often under “Reason Returned.” Incomplete FDME/FDHSs will need to be completed and resubmitted to USAAMA with the requested information. Disqualified FDME/FDHSs are discussed below.

Class 3: Class 3 FDME/FDHS are reviewed by the local flight surgeon and filed directly in the crewmember’s health record. There is no mandated central review. The local FS serves as the final review and disposition for Class 3 physicals except for certain conditions (drug and alcohol abuse or dependence), which require USAAMA review or any case that exceeds the local FS or commander’s expertise level. **NOTE:** Class 3 FDME/FDHS should be entered in AERO and submitted to populate and improve the AEDR. The AERO Sustainment Team is working to update AERO to allow flight surgeons to automate and perform the various class 3 functions electronically to submit the information to the AEDR.

Waiver/Exception to Policy (ETP) Review and Disposition

Waiver (class 2 and 4) and Exception to Policy (class 1) review and disposition is performed centrally at USAAMA in a similar manner to FDMEs/FDHSs. USAAMA performs the central medical review and renders its disposition. If incomplete, the AMS is stamped “Disqualified, Incomplete” and returned to the flight surgeon for remedy. If for information only, USAAMA completes its reviews and dispositions accordingly. Otherwise, USAAMA forwards the medical recommendation to the appropriate central waiver authority (e.g. HRC, NGB, etc.). The waiver/ETP recommendation is approved/disapproved by the centralized waiver authority and centrally managed. If granted, the waiver letter or the AERO Abbreviated Waiver Letter shall be filed in the Individual Flight Record Folder (IFRF) and medical record and follows the crewmember from duty station to duty station. Ensure any waiver letters in the IFRF do not contain any medical information that violates HIPAA.

In contrast, most Class 3 waiver requests are processed locally just as Class 3 physicals. The FS makes the definitive medical recommendation and the local unit commander is the waiver authority (may grant or deny the waiver). The waiver is a local waiver and must be renewed upon permanent change of station (new unit, new waiver authority). For specifics, refer to the APL titled: Class 3 Aircrew Members in the Miscellaneous Section of the APLs. **Note:** a few conditions (exceptions) must be processed through USAAMA for which the local FS and commander do not have waiver authority. Also, certain conditions may use the central waiver authority process to grant a DA waiver, which obviates the need to renew the crewmember’s waiver with each PCS. Aeromedical providers should use AERO to complete Class 3 waivers and note in the recommendation section whether the request is for a local or a central waiver. The approved waiver letter is filed in the IFRF and medical record ensuring the IFRF copy has no medical information that violates HIPAA.

Summary: The first aeromedical disposition is made by the local aeromedical provider in all cases. For class 3 aircrew, it is also the only aeromedical review in the vast majority of cases, and the local commander is the approval authority. For class 2 and 4 waivers (as well as ALL Class 1 ETPs), the package is forwarded to AAMA for review.

The Waiver Process

This process will be discussed using the central review process employed for Class 1, 2, and 4. Remember that Class 3 waivers are generally processed locally and do not have central review. The waiver process has been developed to ensure the consistent and proper management of disqualified aviation personnel. This process has been responsible for the safe return of countless aviators to flying duties once effective treatment has been achieved. It also has been responsible for clearly identifying those individuals with medical conditions incompatible with continued safe flying or their continued good health. It allows for consistent health care management of individuals who routinely receive their health care from many different

health care providers. With proper utilization of senior health care consultants, it ensures the highest level of health care and provides quality assurance. Most importantly, it ensures the maintenance of a readily mobile effective fighting force.

The entire waiver process normally starts with the local FS/APA/AMNP/AME and the discovery of a disqualifying medical condition. Local evaluations and consultations are performed, and the crewmember's condition is carefully documented in an Aeromedical Summary (AMS) in AERO. The AMS is explained in the following section. In addition to documenting the crewmember's work-up, the aeromedical provider also annotates a local aeromedical disposition in the AMS. The recommendation on the medical disposition—qualified or disqualified—from the local FS/APA/AMNP/AME is critical and must be clearly stated. FS/APA/AMNP/AMEs are encouraged and welcomed to contact USAAMA to review complex, interesting, or time-sensitive cases as well as the available results of the evaluation or requirements from the APLs. This serves several purposes that ultimately assist in ensuring the complete and necessary work-up is accomplished in a timely fashion to get towards a final disposition for the aviator. Once the AMS is submitted to USAAMA, it can take several different routes depending on the nature of the problem.

Most waiver requests are straightforward and routine (i.e., those with clear policy established), requiring little more than review for all the required information elements and endorsement. USAAMA physician staff will process the AMS to include the final aeromedical disposition and recommendation along with annual follow-up requirements in the form of an official letter from the Director, USAAMA, to the appropriate waiver authority. The waiver authority will provide the final review and render the final decision, the granting of the recommended action in almost all cases. Any issues or concerns are brought to the attention of USAAMA for clarification. With AERO, time and delay has been greatly reduced in most cases. Occasionally, the USAAMA physician staff upon initial review may request further evaluation or additional information. Often, USAAMA will attempt to dialogue with the FS/APA/AMNP/AME via phone, email, or AERO messaging to discuss the case, work-up, questions, concerns, or notes from AHLTA. The AMS may be referred to the appropriate aeromedical consultant for input. Additional evaluations or studies may be requested locally or with the Naval Aerospace Medical Institute (NAMI), Pensacola, FL, or the USAF Aerospace Medicine Consultation Service (AMCS), Brooks City-Base, TX. With the rapid advancement in medicine, which may outpace policy changes, the ultimate goal is to develop the best recommendation to conserve the fighting strength while keeping in mind the health/welfare/safety of the aviator, crew, unit, and mission.

Cases that are unusual, potentially precedent setting, or involve significant flight or other operational limitations may be presented to the Aeromedical Consultant Advisory Panel (ACAP) (see below). Such an example is a newly diagnosed, asymptomatic aviator with HIV. ACAP is comprised of senior aviation and aeromedical personnel at Fort Rucker. Cases are presented, aeromedical and aviation-related issues are discussed, and a vote of the panel's recommendation is taken. The recommendation of the ACAP is reviewed and endorsed by the Director, USAAMA and forwarded to the appropriate waiver authority. The waiver authority will then take appropriate action, normally producing a formal letter of waiver or a termination notification.

Waiver processing may be time consuming. Complicated cases or cases that have no precedent often take additional time due to the need for specialty consultation, literature review, or query of other services management. **Most routine waivers may be granted temporary clearance pending waiver** and telephonic approval from USAAMA is available for the uncertain or APL directed cases. For rush cases, the most expeditious method is AMS submission via AERO followed by a phone call or email to alert USAAMA of the need. Fax or scan/email of information is perfectly acceptable and the norm.

Aeromedical Consultant Advisory Panel (ACAP)

Director, USAAMA, appoints voting members to the ACAP. Generally, all aerospace medicine specialists assigned to the Ft. Rucker area are appointed as voting members. Experienced flight practitioners credentialed at Lyster Army Health Clinic are also appointed. US Army Aviation Warfighting Center (USAAWC) senior military and DAC aviation personnel are voting members, bringing in the "line" aspect on cases. The Deputy Director of USAAMA, as the Chief, Aeromedical Consultation Service, chairs the ACAP and reviews the recommendations, forwarding the results to the Director, AAMA. The goal of the ACAP is to establish a consensus opinion of aeromedical and aviation experts for case review/disposition and for policy formulation.

Waiver/ETP Criteria

Factors commonly used in the consideration of granting a waiver/ETP include feasibility of treatment and follow-up requirements in a field/austere environment in addition to in-flight safety and mission completion. To be considered waiverable, any disqualifying physical or psychological defect is subjected to the following screening criteria:

- The disqualifying defect must not pose a risk of sudden incapacitation.
- It must not pose any potential risk for subtle incapacitation that might not be detected by the individual but would affect alertness, special senses, or information processing.

- It must be resolved or stable at time of the waiver (i.e., non-progressive).
- It must not be subject to aggravation by military service or continued flying.
- It must not lead to significant loss of duty such as precluding satisfactory completion of training and/or service.
- It cannot require the use of uncommonly available tests, regular invasive procedures, or non-routine medication especially during deployment or assignment to austere areas.
- If the possibility of progression or recurrence exists, the first signs or symptoms must be easily detectable and cannot constitute an undue hazard to the individual or to others.
- It cannot jeopardize the successful completion of a mission.

Sharing Information with Outside Agencies

IAW AR 40-501, chapter 6-13c and 5 USC 552a(b)7, USAAMA is required to pass to the Federal Aviation Administration the names of all aviators who are disqualified from flying duties in the US Army. Flight surgeons should brief patients who are facing likely disqualification accordingly.

Temporary Clearance Pending Waiver

The flight surgeon may grant temporary clearance for minor disqualifications, when following established policy. For example, an aviator with well-controlled hypertension on a stable dosage of an approved agent is routinely granted waivers barring any other underlying medical conditions. This being the case, it is not necessary to keep the aviator grounded pending receipt of the waiver from the waiver authority. The flight surgeon may grant a temporary clearance pending waiver in the interim, expediting return to full duty without compromising aviation safety and keeping with the spirit of applicable regulations. If unsure about granting a Temporary Clearance Pending Waiver, call/email USAAMA.

Exceptions: The following conditions may **NOT** be granted temporary clearance pending waiver: alcoholism and substance abuse, atherosclerotic vascular disease, myocardial infarction, cancer (except single episode of basal cell carcinoma), CVA and other significant CNS disorders (includes TIA, loss of consciousness when unexplained, seizure disorder), skull fracture or severe head injury, significant visual disturbance (e.g. uncorrectable to 20/20⁻¹ or impaired depth perception). Any aircrew that was previously medically disqualified and suspended from aviation duties who is seeking a waiver to return to flight duties and “re-qualification” should not be given temporary clearance beyond that needed for in-cockpit assessment.

Aeromedical Summary: Guide to Completion

An Aeromedical Summary (AMS) is required for any action that requires waiver/exception to policy or permanent medical disqualification/suspension (i.e., permanent termination from flying). The AMS is available in AERO. An abbreviated, focused AMS may be used for most common, straightforward conditions such as hearing loss or hypertension. Templates are under development for AERO. These fairly standard abbreviated AMS consolidates the occupational, aviation, social, family, and past medical history as well as the chief complaint and physical exam findings.

The AMS should be submitted via AERO. To save on administrative headaches, the preferred method of preparing and submitting an AMS is through AERO—this may be printed and placed in the HREC and updated with the final disposition. Storage in AERO foregoes the need to maintain a file copy for 2 years.

If not done in AERO, it should be typed; handwritten submissions are acceptable but must be legible. The AMS should be typed on Optional Form 275, Medical Record Report, March 2002, available from the U. S. Army Publishing Directorate website at: <http://www.usapa.army.mil>. This will facilitate the incorporation of the AMS into Health Records. For typed summaries, at a minimum, an original and a copy of the AMS and supporting documents must be made. The original is forwarded to USAAMA for processing. The copy of the typed AMS must be maintained on file in the FS’s office for a minimum of 2 years IAW AR 40-501, paragraph 6-10 (c & d). Though not required, it is a good idea to make a second copy of the AMS and place it in the crewmembers HREC until the original is returned for filing in the HREC. This redundancy helps minimize problems with lost mail or PCSs of either the aircrew member or his flight surgeon. **NOTE:** Legibility is key. Altered (white out, erased, blocked out, etc.) records are not accepted. Again, use AERO.

The AMS is often submitted with the annual FDME/FDHS, but this is not required. What is required is having a current FDME/FDHS on file with AERO. An AMS concludes with the aeromedical provider’s recommendation, a simple declarative statement of what will be best for the individual, flying safety, and the Army. The recommendations should focus on whether the individual is medically qualified and safe to fly. The FS should state the specific chapter/paragraph regulating the condition and any appropriate APLs. The FS/APA/AMNP/AME must remain strictly objective and not allow personal likes or dislikes, any outside pressure, or personal biases to influence this decision. This recommendation should include any

restrictions as well as recommendations for follow-up or need for further consultation, which is appropriate but unavailable at the location. USAAMA can help coordinate further evaluation/consultation as necessary.

ORGANIZATION OF DOCUMENTS FOR HARD-COPY SUBMISSION

In order to expedite processing of the aeromedical summary, it is important to place documents neatly labeled, tabulated, and collated preferably in chronological order, earlier dates first. This will allow the reviewer to follow chronologically the development/resolution of the defect or condition. The documents should be assembled in the following order:

- Cover letter, if included.
- Aeromedical Summary.
- Enclosures:
 - Any available supportive consultations and reports of all operations;
 - Lab reports, pathology report, tissue examinations;
 - Reports of all studies: x-rays, pictures, films, or procedures (ECG, AGXT, Holter, ECHO, cardiac scans, catheterization, endoscopic procedures, etc.);
 - Hospital summaries and past medical documents (e.g., hospital summaries); reports of any proceedings (tumor board, MEB, PEB, FEB);
 - Letters of recommendation.

NOTE: AMSs for civilian/contract personnel should indicate complete contact information for the waiver authority as well as whether the individual is also in the Reserves or National Guard so that the waiver can be forwarded to all appropriate waiver authorities. Follow the [Template](#) from the APLs.

ORGANIZATION OF DOCUMENTS FOR AERO SUBMISSION

With AERO being a web-based, electronic submission, follow the generated template to complete the submission. Cut and paste pertinent information from AHLTA or word processing documents as required. For complicated or lengthy information, it is acceptable to provide a summary of AHLTA referenced information. AERO does not allow attaching scanned information yet—supplemental information should be referenced in the AMS and email'd, fax'd, or mailed to AAMA, such as "Letters of Recommendation through GO completed and favorable. These have been fax'd to AAMA."

The Aeromedical Epidemiology Data Registry (AEDR)

Enacted in 1973 per AR 40-501, the AEDR, maintained by USAAMA, contains the medical information concerning the physical and historical data related to Army aviators, which has been migrated and tied into AERO. With USAAMA disposition on FDME/FDHS, entries are made in AERO that appear in the medical history and printed cover sheet document. With hardcopy submissions, this document is returned with the original FDME/FDHS to the originating/return facility or becomes available electronically. The local FS office and the crewmember should review this on an annual basis, insure compliance with any annual waiver or information requirements, and submit corrections or changes electronically via the AERO/USAAMA helpdesk.

The AEDR provides the compilation of aeromedical history for use in retrospective analyses, ecologic demographic research, and queries from OTSG, HRC, and sister services. Data is used in review and revision of aeromedical policy and standards. AERO and the AEDR is closely secured and monitored to remain in compliance with HIPAA and security directives. Requests for research or queries should be directed to the Director, USAAMA, or Deputy Director for Administration. Information from the AEDR is sanitized of unique personal identifiers prior to release.

Review of the AMS / Waiver Process

1. The aeromedical provider prepares an aeromedical summary (AMS). The AMS is submitted to USAAMA and placed into AERO, if not already. USAAMA's Review/Disposition Service directs it to the Consult Service Inbox.
2. The USAAMA Consult Service reviews the AMS and current FDME/FDHS for its content, compliance, and annotations to support the recommended action. Straightforward cases with clear policies and directives are processed to the director. More complex, complicated, or precedent setting cases are further reviewed and discussed with the USAAMA Aeromedical staff, Aeromedical consultants, and/or with the Aeromedical Consultant's Advisory Panel (ACAP). Further information, review of AHLTA documentation, and review of AEDR may be utilized for these cases.
3. Complicated or complex cases are further reviewed as above. Some are handled within the Aeromedical Staff (Mini-ACAP) or taken to formal ACAP meetings. Results of Mini-ACAP and ACAP are forwarded to Director, USAAMA, for final review and recommendation.
4. Director's waiver recommendation is forwarded from USAAMA to HRC, NGB, or appropriate waiver authority for final waiver approval or disapproval.

Table 8: Waiver Authorities

<p>ACTIVE ARMY OR USAR CLASSES 1 AND CLASS 2 THRU Director, USAAMA, ATTN: MCXY-AER, Fort Rucker, AL 36362-5333</p> <p>FOR Commander, HRC, ATTN: TAPC-PLA, 200 Stovall Street, Hoffman Building, Room 3N25 Alexandria, VA 22331-0413</p>	<p>ACTIVE ARMY OR USAR CLASSES 2F/P & medical Class 3* THRU Director, USAAMA, ATTN: MCXY-AER, Fort Rucker, AL 36362-5333</p> <p>FOR Commander, HRC Health 3 Services Division, ATTN: TAPC-OPH-MC, 200 Stovall Street Hoffman Building. Room 9N68, Alexandria, VA 22331-0413</p>	<p>ACTIVE ARMY OR USAR CLASS 4 & CLASS 3** THRU Director, USAAMA, ATTN: MCXY-AER, Fort Rucker, AL 36362-5333</p> <p>FOR Commander, HRC ATTN: TAPC-EPL-T 2461 Eisenhower Ave Alexandria, VA 22331-0453</p>
<p>ARNG CLASSES 1/2/4, AND CLASS 3 ** THRU Director, USAAMA, ATTN: MCXY-AER, Fort Rucker, AL 36362-5333</p> <p>FOR Chief, National Guard Bureau, ATTN: NOB-AVN-OP 111 South George Mason Drive, Arlington VA 22204-1392</p>	<p>Contract Civilians All CLASSES THRU Director, USAAMA, ATTN: MCKY-AER, Fort Rucker, AL 36362-5333</p> <p>THRU Contracting Representative Officer</p> <p>FOR Commanding General, or his Designated Waiver Authority (i.e., air field commander or command aviation officer).</p> <p>Send final copy to Contracting Office & Firm.</p>	<p>DAC ALL CLASSES THRU Director, USAAMA, ATTN: MCXY-AER, Fort Rucker, AL 36362-5333</p> <p>THRU Aviation Unit Commander</p> <p>FOR Commanding General, or his designated waiver authority (airfield commander or command aviation officer).</p> <p>Send final copy to local civilian personnel office.</p>

* Includes aeromedical psychologists.

**Class 3: Several other conditions require submission to USAAMA for final review and disposition to include:

- Alcohol and Drug abuse or dependence as above.
- Type II decompression sickness.
- Coronary disease, suspected or proven.
- HIV seropositivity. (Civilian employees are not disqualified based solely on the presence of the HIV virus) Any other condition for which the FS or local aviation commander requests consultation.

-Waivers for other than drug and alcohol abuse/dependence and the above conditions are submitted through the local FS, to the local aviation unit commander for local waiver approval (See Class 3 Aircrew Members APL) unless desiring central waiver approval to reduce administrative processes with each PCS.

ATB: AEROMEDICAL GRADED EXERCISE TEST (AGXT)

1. The indications for the Aeromedical Graded Exercise Test (AGXT), also called graded exercise treadmill (GXT), are described in [AR 40-501](#), Standards of Medical Fitness, paragraph 4-15, and various APLs where cardiac health is an issue, most often from conditions referenced in the Cardiology Chapter of the APLs, in particular the [Cardiovascular Screening Program](#). The guidelines for performing an aeromedical GXT are outlined below to apply a uniform standard in the performance and interpretation of this test on aircrew members.
2. Prior to the AGXT, the aircrew member should be briefed by the local flight surgeon as to the indications for the test, the procedure, and the significance of the results. The patient should sign an informed consent statement.
3. The following conditions should be assured prior to testing:
 - a. Minimum of four hours fasting prior to test.
 - b. No tobacco or caffeine products one hour prior to test.
4. The aeromedical GXT must be a maximal effort, limited only by symptoms, exhaustion, or objective signs (medically significant ectopy, dysrhythmia, ischemia, or blood pressure response). Exercise should not be halted on attainment of a predicted maximal heart rate. Often, testing should proceed to 100% of predicted HR or beyond. Clinical decision-making may override termination.
5. A final report of the AGXT including date of study, interpretation, patient's activity level and attained workload should be annotated with the FDME/FDHS and /or AMS for review and disposition. Actual tracings do not need to be sent, and if required, will be requested by USAAMA.
6. A copy of [Aeromedical Graded Exercise Test Report Form \(enclosure 1\)](#) and [Letter to the Attending Physician \(enclosure 2\)](#) of this ATB should be forwarded with the patient to the attending physician conducting the AGXT.
7. Aeromedical standards for interpretation of treadmill exercise tests in Army aircrew members.
 - a. Baseline: The location of three consecutive coplanar ST segments, measured 80 milliseconds after the "J" junction, following 30 seconds of standing hyperventilation. This baseline may be on, above, or below the PQ segment, but must be parallel to it.
 - b. Definition of Abnormal tracing: **1.0** or more millimeters of ST depression in three (3) consecutive coplanar complexes, measured 80 milliseconds after the "J" junction, irrespective of slope. Other causes for an abnormal result include: atrial flutter or fibrillation, supraventricular or ventricular tachycardia (three or more consecutive premature beats including multifocal atrial tachycardia), supraventricular or ventricular pairs (couplets), multiform ventricular premature ectopy, ventricular premature R wave on preceding T wave, or hypotensive or excessive hypertensive response of any degree. Chest pain/pressure, angina, infarction, or the suspicion of significant peripheral vascular disease, likewise, constitutes an abnormal result requiring further evaluation and management. If abnormal, apply follow-up guidelines from the [Abnormal Cardiac Function Testing APL](#).

ENCLOSURE 1:

Aeromedical Graded Exercise Test Report Form

Patient Name:				SSAN:		DATE:	
Rank:		Age:		Gender:		Race:	
HT/WT (in/lbs)		Medications:					
Facility:		LDL:					
HDL:		Chol/HDL ratio:		Tot Chol:		FRI:	

Bruce Protocol							
Pre-Exercise:		Sitting Heart Rate:			Sitting BP		Resting EKG Analysis
		Hypervent HR:			Hypervent BP:		
		Supine HR:			Supine BP:		

EXERCISE	Minutes	MPH	%Grade	Heart Rate	BP	Comments (Sxs, EKG Changes, etc.)
	0	1.7	10			
	1					
	2					
	3	2.5	12			
	4					
	5					
	6	3.4	14			
	7					
	8					
	9	4.2	16			
	10					
	11					
	12	5	18			
	13					
	14					
15	5.5	20				

Post Exercise	Immediate	-	-		
	2	-	-		
	5	-	-		
	8	-	-		

ANALYSIS	
Total Exercise Time:	Max. BP:
Peak Exercise Heart Rate:	
Total Mets:	
Reason for Termination:	
<div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> Exhaustion <input type="checkbox"/> ST Seg changes <input type="checkbox"/> Joint/Muscle Pain </div> <div> <input type="checkbox"/> Chest Pain/Angina <input type="checkbox"/> Hypertensive BP Response <input type="checkbox"/> Poor Conditioning </div> <div> <input type="checkbox"/> Dysrhythmia <input type="checkbox"/> Fatigue <input type="checkbox"/> Other </div> </div>	
Physician Interpretation:	
<input type="checkbox"/> Normal <input type="checkbox"/> Abnormal Comments:	
<div style="display: flex; justify-content: space-between;"> Physician Stamp: Physician Signature: </div>	

ENCL 1 ATB 11-01

ENCLOSURE 2:

AGXT: Letter to the Attending Physician

TO: ATTENDING PHYSICIAN

FROM: FLIGHT SURGEON'S OFFICE

SUBJECT: Aeromedical Graded Exercise Test

1. A graded exercise test has been requested by the US Army Aeromedical Activity on this US Army aircrew member to explore the possibility of aeromedically significant coronary disease and other cardiac abnormalities. Please follow the definitions and diagnostic criteria listed below in the interpretation of this test. Since this study has occupational medicine importance, these criteria are intended to yield maximal sensitivity. Please do not apply other criteria.
2. The following conditions should be assured prior to testing:
 - a. Minimum of four (4) hours fasting prior to test.
 - b. No tobacco or caffeine for one (1) hour prior to test.
3. The aeromedical GXT must be a maximal effort, limited only by symptoms, exhaustion, or objective signs (medically significant ectopy, dysrhythmia ischemia, or blood pressure response). Exercise should not be halted on attainment of a predicted maximal heart rate. Often, testing may proceed beyond 100% of predicted maximal HR, and clinical decision-making should be used for termination.
4. Determination of abnormal exercise tolerance tests for US Army aircrew members:
 - a) Baseline: The location of three (3) consecutive coplanar ST segments, measured 80 milliseconds after the "J" junction following 30 seconds of standing hyperventilation. This baseline may be on, above, or below the PQ segment, but must be parallel to it.
 - b) Abnormal: 1.0 or more millimeters of ST depression in three (3) consecutive coplanar complexes, measured 80 milliseconds after the "J" junction, irrespective of slope. Other causes for an abnormal result include: atrial flutter or fibrillation, supraventricular or ventricular tachycardia (three or more consecutive premature beats including multifocal atrial tachycardia), supraventricular or ventricular pairs (couplets), multiform ventricular premature ectopy, ventricular premature R wave on preceding T wave, or hypotensive or excessive hypertensive response of any degree. Chest pain/pressure, angina, infarction, or the suspicion of significant peripheral vascular disease, likewise, constitutes an abnormal result requiring further evaluation and management.

ATB: ATC Medical Standards (DAC and Civilian Contract)

AEROMEDICAL CONCERNS: The duties of an ATC require a certain level of health status or fitness based on the nature of the position—duties involving a high degree of responsibility toward the public in view of their control of aircraft at and in the vicinity of military and civilian airfields.

GENERAL: This aeromedical technical bulletin will serve as a guide for the conduct of the Air Traffic Controller Medical Examination (ATCME for DAC and Civilian Contract ATCs). The ATCME may be completed by an aeromedical provider (flight surgeon, APA, AMNP, or AME) from any branch of military service and will be completed annually for all DAC/Civilian contract ATC. Per reference 3 listed below, medical standards for DAC and contract civilians are outlined in the OPM manual and summarized here.

This ATB implements the occupational health standards for DAC/Civilian ATCs as outlined by the Office of Personnel Management (OPM). Current OPM standards address both application and retention for ATCs. These standards do not provide any specific means to apply those standards, nor do they outline any process to waive medical conditions or continued medical treatment for continued safe execution of ATC duties. **Thus, personnel found to be outside medical standards must follow the Aeromedical Policy Letters for evaluation, waiver submission, and annual waiver requirements.**

Aeromedical Summaries (AMS) and waiver requests for those conditions not meeting current application or retention standards will be processed per current USAAMA policy. Review of cases requiring waiver from the OPM standards involving DAC or civilian contract ATCs will include consideration of the very low, but real, likelihood of deployment to austere environments or stationing away from regular medical care. These AMS/waiver requests will be prepared, submitted, and processed as outlined in AR 40-501 and the Flight Surgeon Administrative Guide. Aeromedical Policy letters will serve as guidelines for required evaluation and information of such conditions. Evaluations will often need to be completed by the DAC/Civilian Contract ATC's regular civilian health care providers and will be reviewed by the FS/APA/AMNP/AME to complete the aeromedical summary for waiver. The patient, and not the MTF or US Government, is ultimately responsible for any costs accrued in the evaluation and maintenance of aeromedically disqualifying conditions.

FAA PHYSICALS: FAA physicals for either category of ATC are not required by DA or the FAA and will not be accepted as certification of medical fitness. Any DAC or Civilian contract ATC who pursues a FAA certificate does so at their own expense, unless specifically covered by their contract.

DA FORM 4186 (Upslip): A DA Form 4186, Medical Recommendation for Flying Duty, signed by an aeromedical provider of any military service must be completed as part of the ATCME and serves as a recommendation to the local airfield commander of the individual's medical fitness for execution of ATC duties. A FAA examination or 8500-9 certificate for DAC or civilian ATCs will not be accepted or processed by USAAMA for this requirement. Aeromedical providers will not accept a FAA physical to issue a DA Form 4186 based on presentation of a FAA examination or certificate. Failure to comply with the annual requirement for an ATCME or a current valid DA Form 4186 may result in medical disqualification.

ATC Medical Examinations (ATCME): There are two broad categories of ATCME. They are:

- 1. Initial ATCME**—Performed for initial employment purposes. They are valid for up to 18 months from the date of examination.
- 2. Retention ATCME**—Performed on ATC once already trained or in service. This is performed for re-certification for DAC and civilian ATC on an annual basis. It is generally valid for 12 months and is synchronized with the ATC's birth month.

For birth month alignment of the ATCME, see the Flight Surgeon Administrative Guide.

Forms: The initial and retention ATCMEs are performed on DD Forms 2807-1 and 2808. The ATCME may be submitted in hard copy or electronically to USAAMA using the AERO. Separate, distinct class 4 ATCME templates are in development for future AERO users. Civilian or contract civilian ATCs do not have an interim FDHS (DA 4497-R).

OPM Standards for Air Traffic Controllers:

The text below is extracted verbatim from Section IV-B of the Operating Manual for Qualification Standards for General Schedule Positions (p.IV-B-272) <http://www.opm.gov/qualifications/index.htm>. Table 9 below provides a useful table.

Initial Employment: Applicants for initial employment to air traffic control specialist positions must meet the following requirements. (Unless otherwise indicated, these requirements are identical for all specializations.)

A. Eye

1. *Visual Acuity*
 - a. *Terminal and Center Positions*--Applicants must demonstrate distant and near vision of 20/20⁻¹ or better (Snellen or equivalent) in each eye separately. If glasses or contact lenses are required, refractive error that exceeds plus or minus 5.50 diopters of spherical equivalent or plus or minus 3.00 diopters of cylinder is disqualifying. The use of orthokeratology or radial keratotomy methods is not acceptable for purposes of meeting this requirement. The use of contact lenses for the correction of near vision only or the use of bifocal contact lenses for the correction of near vision is unacceptable.
 - b. *Flight Service Station Positions*--Applicants must demonstrate distant and near vision of 20/20⁻¹ or better (Snellen or equivalent) in at least one eye. If glasses or contact lenses are required, a refractive error in at least one eye that exceeds plus or minus 8.00 diopters of spherical equivalent will necessitate an ophthalmologic consultation to establish absence of ocular pathology that could interfere with visual function. The use of contact lenses for the correction of near vision only or the use of bifocal contact lenses for the correction of near vision is unacceptable.
Equivalents in Near Visual Acuity Notations Standard Test Chart: 14/14
Snellen Metric: 0.50M
Jaeger: J-1
Metric: 6/6
2. *Color Vision*--For all specializations, applicants must demonstrate normal color vision.
3. *Visual Fields*
 - a. *Terminal and Center Positions*--Applicants must demonstrate a normal central visual field, i.e., the field within 30 degrees of the fixation point, in each eye. They must also demonstrate a normal peripheral visual field, i.e., the field of vision beyond the central field that extends 140 degrees in the horizontal meridian and 100 degrees in the vertical meridian, in each eye.
 - b. *Flight Service Station Positions*--Applicants must demonstrate a normal central field of vision, i.e., the field within 30 degrees of the fixation point, in at least one eye.
4. *Intraocular Pressure*--For all specializations, if tonometry reveals either intraocular pressure greater than 20 mm of mercury, or a difference of 5 or more mm of mercury intraocular pressure between the two eyes, ophthalmologic consultation is required to rule out the presence of glaucoma. If a diagnosis of glaucoma is made, or if any medication is routinely required for control of intraocular tension, the applicant is disqualified.
5. *Phorias*
 - a. *Terminal and Center Positions*--If an applicant demonstrates greater than 1-1/2 prism diopters of hyperphoria or greater than 10 prism diopters of esophoria or exophoria, evaluation by a qualified eye specialist is required. If this evaluation determines that bifoveal fixation and vergence-phoria relationships sufficient to prevent disruption of fusion under normal working conditions are not present, the applicant is disqualified.
 - b. *Flight Service Station Positions*--Applicants must demonstrate the absence of diplopia in the cardinal fields of gaze.
6. *Eye Pathology*--For all specializations, if examination of either eye or adnexa reveals any form of glaucoma or cataract formation, uveitis, or any other acute or chronic pathological condition that would be likely to interfere with proper function or likely to progress to that degree, the applicant is disqualified.
7. *Chronic Eye Disease*--For all specializations, an applicant with any chronic disease of either eye that may interfere with visual function is disqualified.
8. *Ocular Motility*--For terminal and center specialist positions, applicants must demonstrate full extraocular motility.
9. *History of Eye Surgery*--For all specializations, a history of ocular surgery requires ophthalmologic consultation. If consultation indicates that the condition that necessitated surgery could interfere with the

visual function necessary for performance as an air traffic control specialist, the applicant is disqualified. A history of radial keratotomy is disqualifying.

B. *Ear, Nose, Throat, Mouth*

1. Examination must show no outer, middle, or inner ear disease—acute or chronic, unilateral or bilateral.
2. Examination must show no active disease of either mastoid.
3. Examination must show no unhealed perforation of either eardrum.
4. Examination must show no deformity of either outer ear that might interfere with the use of headphones of the applied or semi-inserted type.
5. Examination must show no disease or deformity of the hard palate, soft palate, or tongue that interferes with enunciation. The applicant must demonstrate clearly understandable speech, and an absence of stuttering or stammering.
6. Applicants must demonstrate, by audiometry, no hearing loss in either ear of more than 25 decibels in the 500, 1000, or 2000 Hz ranges and must demonstrate no hearing loss in these ranges of more than 20 decibels in the better ear, using ISO (1964) or ANSI (1969) standards. Hearing loss in either ear of more than 40 decibels in the 4000 Hz range may necessitate an otologic consultation. Incipient disease processes that may lead to early hearing loss will be cause for disqualification.

C. *Cardiovascular*

1. No medical history of any form of heart disease. Must demonstrate absence of heart disease to clinical examination, including resting and post-exercise electrocardiogram.
2. Blood pressure levels no greater than the appropriate values as shown below:

Age	Maximum Reclining Blood Pressure	
	Systolic	Diastolic
20 to 29	140	90
30 to 39	150	90
40 to 49	150	100
50 & over	160	100

3. Must demonstrate to X-ray no evidence of increase in heart size beyond normal limits.
4. An applicant under any form of treatment for any disease of the cardiovascular system is disqualified.

D. *Neurological*

1. No medical history or clinical diagnosis of a convulsive disorder.
2. No medical history or clinical diagnosis of a disturbance of consciousness without satisfactory medical explanation of the cause.
3. No other disease of the nervous system that would constitute a hazard to safety in the air traffic control system.
4. An applicant under any form of treatment, including preventive treatment, of any disease of the nervous system, is disqualified.

E. *Musculoskeletal*

1. No deformity of spine or limbs of sufficient degree to interfere with satisfactory and safe performance of duty. Certain limitations of range of motion may be acceptable for certain specific options or positions, in which case acceptance of limitations will be noted specifically for that position or option only.
2. No absence of any extremity or digit or any portion thereof sufficient to interfere with the requirements for locomotion and manual dexterity of the position being sought. Acceptance of limitations for employment for a specific option or position will be noted for that option or position only.
3. No condition that predisposes to fatigue or discomfort induced by long periods of standing or sitting.

F. *General Medical*

1. No medical history or clinical diagnosis of diabetes mellitus.
2. Must possess such a body build as not to interfere with sitting in an ordinary office armchair.
3. Must have no other organic, functional, or structural disease, defect, or limitation found to indicate clinically a potential hazard to safety in the air traffic control system. A pertinent history and clinical evaluation, including laboratory evaluations, will be obtained, and when clinically indicated, special consultations or examinations will be accomplished.

G. *Psychiatric*

No established medical history or clinical diagnosis of any of the following:

1. A psychosis;
2. A neurosis; or

3. Any personality or mental disorder that clearly demonstrates a potential hazard to safety in the air traffic control system. Determinations will be based on medical case history (including past, social, and occupational adjustment) supported by clinical psychologists and board-certified psychiatrists, including such psychological tests as may be required as part of medical evaluation.

H. *Substance Dependency*

A history, review of all available records, and clinical and laboratory examination will be utilized to determine the presence or absence of substance dependency, including alcohol, narcotic, and non-narcotic drugs. Wherever clinically indicated, the applicant must demonstrate an absence of these on any clinical or psychological tests required as part of the medical evaluation.

Retention Requirements: The physical requirements in this section apply to: (1) air traffic control specialists in the center and terminal specializations who are actively engaged in the separation and control of air traffic, (2) immediate supervisors of air traffic control specialists actively engaged in the separation and control of air traffic, and (3) air traffic control specialists in the station specialization who regularly perform flight assistance services.

Employees occupying the types of positions described above must requalify in an annual medical examination, usually given during the employee's month of birth. Controllers incurring illness, injury, or incapacitation at any time between the annual examinations must be medically cleared before returning to air traffic control duty. Examinations, including laboratory tests and consultations, will be accomplished to the extent required to determine medical clearance for continued duty. New employees are required to meet the retention requirements by examination during the first 10 months of service. Employees who are found to be not physically or emotionally qualified for air traffic control duties at any time will be subject to reassignment to a position for which they are fully qualified, retirement for disability if eligible, or separation from the service.

To be medically qualified for retention, an air traffic control specialist must meet the following requirements. (Unless otherwise indicated, these requirements are identical for all specializations.)

A. *Eye*

Retention requirements for vision and eye conditions are identical to the requirements for initial hire.

B. *Ear, Nose, and Throat*

1. *Ear Disease; Equilibrium*

- a. *Terminal and Center Positions*--Must demonstrate no chronic disease of the outer or middle ear, unilateral or bilateral, that might interfere with the comfortable, efficient use of standard headphone apparatus or that might interfere with accurate perception of voice transmissions or spoken communications. Must have no ear disease that might cause a disturbance of equilibrium.
- b. *Flight Service Station Positions*--Must demonstrate no chronic disease of the outer or middle ear, unilateral or bilateral, that might interfere with accurate perception of voice transmissions or spoken communications. Must have no ear disease that might cause a disturbance of equilibrium.

2. *Mastoid*--No active disease of either mastoid.

3. *Eardrum Perforation*--Must demonstrate no unhealed perforation of either eardrum.

4. *Speech*--Must have no interference with enunciation, and must have clear speech free of stuttering or stammering.

5. *Hearing Loss*--No hearing loss in either ear of more than 30 decibels in either the 500, 1000, or 2000 Hz ranges. No loss in these ranges greater than 25 decibels in the better ear. Non-static hearing loss in either ear of greater than 50 decibels in the 4000 Hz range will require an otologic consultation.

C. *Cardiovascular*

1. *Heart Disease*

- a. *Terminal and Center Positions*--No history or symptomatic form of heart disease or any form requiring therapy.
- b. *Flight Service Station Positions*--No symptomatic form of heart disease.

2. *Disturbance of Rhythm; Other Abnormality; EKG*--Must demonstrate no disturbance of rhythm or other cardiac abnormality on clinical examination, including resting, and when clinically indicated, post-exercise electrocardiography.

3. *Blood Pressure*--Retention requirements are identical to the requirements for initial hire.

4. *Heart Size*--Must have no increase in heart size beyond normal limits.

D. *Neurological*

Retention requirements are identical to the requirements for initial hire.

E. *Musculoskeletal*

Retention requirements are identical to the requirements for initial hire.

F. *General Medical*

1. *Diabetes Mellitus*

- a. *Terminal and Center Positions*--An employee who has an established clinical diagnosis of diabetes mellitus will be evaluated for continued duty based upon the degree of control of the disease. Whether by diet alone, or diet and hypoglycemic drugs, control that results in the absence of symptoms and the absence of complications of the disease or the therapy may be considered as satisfactory control. A controller with diabetes mellitus who cannot demonstrate satisfactory control over specified and observed periods of 48 hours is not cleared for duty involving active air traffic control.
 - b. *Flight Service Station Positions*--An employee who has an established clinical diagnosis of diabetes mellitus will be evaluated for continued duty based upon the degree of control of the disease. Whether by diet alone, or diet and hypoglycemic drugs, control that results in the absence of symptoms and the absence of complications of the disease or the therapy may be considered as satisfactory control.
2. *Body Configuration*--Must possess such a body build as not to interfere with sitting in an ordinary office armchair.
 3. *Other Medical Conditions*--Must have no other organic, functional, or structural disease, defect, or limitation found to indicate clinically a potential hazard to safety in the air traffic control system. A pertinent history and clinical evaluation, including laboratory screening, will be obtained, and when clinically indicated, special consultations and examinations will be accomplished.

G. *Psychiatric*

1. *Psychotic Disorder*--No established medical history or clinical diagnosis of a psychosis.
2. *Mental, Neurotic, or Personality Disorder*--No neurosis, personality disorder, or mental disorder, that clearly indicates a potential hazard to safety in the air traffic control system. Determinations will be based on medical case history (including past, social, and occupational adjustment) supported by clinical psychologists and board-certified psychiatrists, including such psychological tests as may be required as part of medical evaluation.
3. *Alcoholism and/or Alcohol Abuse*--No clinical diagnosis of alcoholism or alcohol abuse, since these constitute a hazard to safety in the air traffic control system. A history and clinical evaluation, including laboratory evaluation (when indicated) will be accomplished to determine the presence or absence of alcohol addiction, dependency, habituation, abuse, or use.
4. *Addiction, Dependency, Habituation, or Abuse of Dangerous Drugs*--No clinical diagnosis of addiction, habituation, dependency, or abuse of any narcotic or non-narcotic drug, since these constitute a threat to safety in the air traffic control system. A history and clinical evaluation, including laboratory evaluation (when indicated), will be accomplished to determine the presence or absence of drug addiction, dependency, habituation, abuse, or use.

ATCME CHECKLIST

The following is a checklist to assist in completing the required items for both the initial employment and retention ATCMEs for DAC/Civilian ATC. DD form 2807-1, Report of Medical History, will be completed as for all other classes of ATCME and will be submitted annually.

Table 9: Summary of DD Form 2808 for OPM Standards, Jul 2001

	Initial Applicants	Retention
1-16 Admin Data	Y	Y
17-29, 31,33-36,38-40. Clinical Exam <i>Note: Only certain sites are required</i>	Y	Y
45b Urine Glucose	N	(1)
50 Drugs	(2)	(3)
51 Alcohol	(3)	(3)
57 Pulse	Y	Y
58a Blood Pressure - Only one reading req.	Y	Y
61 Distant Vision	Y	Y
62 Manifest Refraction	(4)	(4)
63 Near Vision	Y	Y
64 Heterophorias	Y	Y
Cover Test / Cross-cover	Y	Y
Near Point Convergence	Y	Y
66 Color Vision	Y	Y
67 Depth Perception	Y	Y
68 Field of Vision	Y	Y
70 IOPs	Y	Y
71a Audiometer	Y	Y
72a Reading Aloud Test	Y	Y
73 Notes-		
Additional Lab: Fasting Glucose	N	(1)
ECG	Y (5)	Y
CXR	Y	(3)
Aeronautical Adaptability (formerly known as ARMA)	(6)	(6)
74a Qualification	Y	Y
77 Summary of Defects	Y	Y
78 Recommendations	Y	Y
81a-84b Examiner names and signatures	Y	Y

Notes:

- (1) For retention examinations only, ATCs with a diagnosis of Diabetes Mellitus will undergo the FBS and urine glucose to demonstrate satisfactory control.
- (2) For initial applicants, the provisions of AR 600-85, Chapter 14, and Federal Acquisition Regulation (FAR), subpart 23.5 apply.
- (3) If clinically indicated.
- (4) Required if unaided near/distant vision is not 20/20⁻¹.
- (5) For initial applicants must include resting and post-exercise electrocardiogram.
- (6) For initial or retention examinations, this will only be completed if there is evidence by medical history or clinical diagnosis by clinical psychologists and board certified psychiatrists of a psychosis, neurosis, or any other personality or mental disorder that clearly demonstrates a potential hazard to safety in the air traffic control system.

- EKGs are required on all examinations and for initial require resting and post- exercise. If clinically indicated, the retention ATCME also requires a post-exercise study.

- Drug screening will be done as listed above per regulatory guidance for initial applicants. For retention physicals, any questionable medical history or clinical findings should be referred to the local Alcohol and Substance Abuse Program office for evaluation.
- Reading Aloud Test (RAT) will be performed annually to assess for understandable speech and no pattern of stuttering or stammering.
- CXR will be done on initial applicants to assess for any increase in heart size beyond normal limits.
- OPM standards will be used as the measure for vision testing and these standards are identical for initial and retention physicals. To assist the FS/APA/AMNP/AME in the conduct of visual testing the current vision ATBs located on the USAAMA website may be used as a guide:
http://usasam.amedd.army.mil/_AAMA/technicalBulletins.htm

NOTE: ATCME with approved aeromedical waiver(s) must adhere to the annual waiver requirements as specified in the APL(s) and the waiver granted letter.

REFERENCES:

1. 5CFR339.202-303, January 1998.
2. AR 40-501, Standards of Medical Fitness, paragraph 4-33, September 2002.
3. OPM Qualification Standards for General Schedule Positions, GS 2152: Air Traffic Control Series.
4. Flight Surgeon Administrative Guide, USAAMA, March 2003.
5. AR 600-85, Army Substance Abuse Program, October 2001.

Table 10. OPM/GS-2152 DAC/Civilian Contract ATC Standards Summary

Aeromedical Vision Standards						
Qualified if:		Corrected Visual Acuity, Qualified if better than:		Phorias, DQ if:		
Position	Spherical equiv. within +/- 5.50 diopters and Cyl within +/- 3.00 diopters	Distant	Near	Eso	Exo	Hyper
Terminal and Center		20/20 ⁻¹ in each eye	20/20 ⁻¹ in each eye	>10	>10	>1.5
Flt Srv Station	Spherical equiv. within +/- 8.00 diopters	20/20 ⁻¹ in one eye	20/20 ⁻¹ in one eye	Diplopia in any the cardinal fields of gaze		

Position	Visual Fields Qualified if:	IOP Qualified if:	Extra-Ocular Motility Qualified if:	Color Vision Qualified if:
Terminal and Center	Normal central and peripheral visual fields Full	< 21 mmHg and difference < 5 mmHg between eyes	Full	Normal Color Vision -- test unspecified
Flt Service Station	Normal central visual field in at least one eye	< 21 mmHg and difference < 5 mmHg between eyes	Not Addressed	Normal Color Vision -- test unspecified

Aeromedical Audiology Standards						
<u>Applicants</u>						
Qualified if Equal or Better than:						
	500Hz	1000Hz	2000Hz	3000Hz	4000Hz	6000Hz
Either ear	25 dB	25 dB	25 dB	No std	40 dB	No std
Best ear	20 dB	20 dB	20 dB	No std	40 dB	No std
<u>Retention</u>						
Qualified if Equal or Better than:						
	500Hz	1000Hz	2000Hz	3000Hz	4000Hz	6000Hz
Either ear	30 dB	30 dB	30 dB	No std	50dB	No std
Best ear	25 dB	25 dB	25 dB	No std	50 dB	No std

Laboratory Normal Values	
FBS	<126 mg% (see retention standards)
UA Drug Screen	Negative (Only required for initials)

Age	Max. Recumbent SBP	Max. Recumbent DBP
20-29	140 mmHg	90 mmHg
30-39	150 mmHg	90 mmHg
40-49	150 mmHg	100 mmHg
50 & over	160 mmHg	100 mmHg

ATB: DEPTH PERCEPTION TESTING

(DD Form 2808, Block 67. 'DEPTH PERCEPTION')

Important note concerning the current DD Form 2808 with HARDCOPY (paper) submissions.

The current DD Form 2808 has a pre-printed 'AFVT' in block 67. Although this is convenient for entering in the results of the Armed Forces Vision Tester (AFVT) depth perception test, it is not intended to exclude other authorized depth perception testing, such as the OPTEC 2300, the Random Dot (RANDOT) Circles Test, or the Titmus Graded Circles Stereoacuity Test. If not using the AFVT, line through the pre-printed entry and record the test used with the proper score. If using the AFVT and then also another depth perception test, record the AFVT in block 67 and then record the additional depth perception test findings in block 60 (Other Vision Test) or block 73 (Notes). With use of the AERO DD Form 2808, annotate results on page 2A and additional results/comments in Remarks on page 2B.

Purpose/Indications.

Mandatory for all flight physicals. This measures fine depth perception through the ability to fuse stereoscopic targets.

Equipment.

AFVT (Armed Forces Vision Tester) or OPTEC 2300

- or -

RANDOT (Random Dot Circles Test) - with polarized glasses (included with test)

- or -

Titmus (Titmus Graded Circles Stereoacuity Test) - with polarized glasses (included with test)

Set-Up.

AFVT (Armed Forces Vision Tester) or OPTEC 2300:

- Patient seated comfortably at the AFVT (or OPTEC 2300).
- Patient wears habitual spectacle prescription (if applicable).
- May test without corrective prescription, but if fails, retest with corrective prescription.
- Test emulates distance test (optical infinity).
- Refer to manual for correct settings for model being used.

RANDOT (Random Dot Circles Test) or the Titmus (Titmus Graded Circles Stereoacuity Test):

- Patient wears habitual spectacle prescription (if applicable).
 - May test without corrective prescription, but if fails, retest with corrective prescription.
- Polaroid spectacles worn (over habitual prescription if also worn).
- Test distance is 40 cm (16 inches).
- Provide adequate light but avoid reflections from the test's surface.
- Hold test upright to maintain the proper axis of polarization.
- Do not permit the patient's head to tilt during testing.

Step-By-Step Procedure.

AFVT (Armed Forces Vision Tester) or OPTEC 2300:

- Refer to manual for correct settings for model being used.
- Group A is for demonstration purposes ONLY and should not be used as part of the actual test (see manual).
- Group B is at the level of the new overall standard of 40 seconds of arc; there are three presentations of five circles each within Group B.
- Patient identifies the circle within each presentation that appears 'closest'.
- Patient must correctly identify all presentations within Group B to pass.
- You may test beyond Group B if desired, but it is not necessary.
- Record as "AFVT Group B – 40 arc sec PASS" or words to that effect.

- If fails any in Group B, retest using RANDOT and/or Titmus below.

RANDOT (Random Dot Circles Test):

- There are ten presentations of three circles each in the RANDOT.
- You must test ALL ten presentations; do not stop after number seven.
- You must test all presentation IN ORDER; do not jump around since each level is progressively more difficult.
- Patient identifies the circle that appears 'closest'.
- Test until the patient misses two levels in a row.
- Record the last level passed successfully.
- For RANDOT, a minimum passing score is correctly identifying presentations 1 THROUGH 7 which equals 40 seconds of arc.
- Record as the number missed over the number possible.
 - For example, 'RANDOT 3/10 – 40 arc sec PASS' or words to that effect.
- If fails the RANDOT, may retest using AFVT/OPTEC 2300 or Titmus.

Titmus (Titmus Graded Circles Stereoacuity Test):

- There are nine presentations of four circles each in the Titmus.
- You must test ALL nine presentations.
- You must test all presentations IN ORDER; do not jump around since each level is progressively more difficult.
- Patient identifies the circle that appears 'closest'.
- Test until the patient misses two levels in a row (or the last presentation).
- Record the last level passed successfully.
- For Titmus, a minimum passing score is correctly identifying ALL of the presentations 1 THROUGH 9 which equals 40 seconds of arc.
- Record as the number missed over the number possible.
 - For example, 'Titmus 0/9 – 40 arc sec PASS' or words to that effect.
- If fails the Titmus, may retest using AFVT/OPTEC 2300 or RANDOT.

Note: Refer to Eye Clinic if subject fails any depth perception testing for more formal evaluation, i.e.:

- misses any presentations within Group B of the AFVT or OPTEC 2300;
- or, misses any of presentations 1 through 7 of the RANDOT;
- or, misses any of the nine presentations of the Titmus.

Note: The Verhoeff Testing Apparatus is no longer authorized for depth perception screening on any flight physical. 'Grandfathering' this test for such personnel has expired with this update. Personnel previously passed with Verhoeff must pass current testing methods, or apply for waiver after full optometric/ophthalmologic evaluation.

ATB: COLOR VISION TESTING(DD Form 2808, Block 66, 'COLOR VISION')**Important note concerning the current DD Form 2808 for HARDCOPY (paper submissions).**

The current DD Form 2808 has a pre-printed 'PIP' and a pre-printed '/14' in block 66. Although this is convenient for entering in the results of the Pseudo-Isochromatic Plate (PIP) color test, it is not intended to exclude other authorized color vision testing, such as the Farnsworth Lantern (FALANT) or the OPTEC-900 Color Vision Tester. If not using the PIP, line through the pre-printed entries and record the test used with the proper score. If using the PIP and then also another color vision test, record the PIP in block 66 and then record the additional color test findings in block 60 (Other Vision Test) or block 73 (Notes). For use of AERO's DD Form 2808, enter results on page 2A and additional tests or comments on page 2B in "Remarks." Annotate PIP2 or F2 PASS in remarks until made available in AERO.

Purpose/Indications.

Mandatory for all initial, comprehensive, and post-mishap FDMEs. This screens for color vision deficiencies. See note at the end of section. PIP is done first. FALANT is only done if failing PIP.

Equipment.PIP Series (Pseudo-Isochromatic Plates, PIP1 AND F2/PIP2):

- Only the PIP test which contains 14 test plates with numbers is authorized at this time (no traced lines). Most tests with 14 test plates also contain one or two 'demonstration' plates that can be seen readily, even in the presence of a color vision deficiency. Once the examinee understands the test with these demonstration plates, present the other 14 plates. Do not count the demonstration plates.
- F2 is a single test plate, used for assessing blue-yellow weakness or deficiency and some red-green deficiencies. PIP2 is a 10-plates series that should be administered with an eye specialist. Blue-yellow deficiency is normally rare without other deficits in the red-green axis, but may present with age, ocular diseases, or medication side-effects (such as Viagra®).
- The recommended source of illumination is the Macbeth Easel Lamp. However, the Daylight HRR Illuminator, "daylight" fluorescent bulb, other standard illuminant "C" light source, or other source providing a light source rating of C.R.I. 90 and 6200° Kelvin, may be used instead. If none of these are available, see the PIP Set-Up section below.

FALANT (Farnsworth Lantern) or the OPTEC 900-Color Vision Tester:

- The Farnsworth Lantern and the OPTEC-900 Color Vision Tester are equivalent for FDME test purposes.

Set-Up.PIP Series (Pseudo-Isochromatic Plates, PIP1 and F2/PIP2):

- Place the light source (Macbeth Easel Lamp, Daylight HRR Illuminator, "daylight" fluorescent bulb, or other standard illuminant "C" light source) on a table or shelf so that the subject's line of sight is at right angles to the plates, and so his/her eyes are at a distance of approximately 30 inches.
- If subject wears glasses for flight, test with glasses on.
- The subject should not face an open window or other strong light. Nearby incandescent lights (those with any yellow wavelengths) should be shielded (or off) so they do not illuminate the plates. Cover any nearby windows.
- If none of the recommended light sources are available, use regular room lighting but avoid any incandescent lights (yellow wavelengths). If the examinee fails in this case, you may do any of the following:
 - Retest using the FALANT or OPTEC-900 instead
 - Retest using light reflected from the north sky (sunny day) or refer to the optometry clinic

FALANT (Farnsworth Lantern) or the OPTEC-900 Color Vision Tester:

- Test distance is eight (8) feet with the aperture facing the subject.
- If subject wears glasses for flight, test with glasses on.
- Give the test in a normally lighted room; screen from glare; exclude sunlight. Subject should not face the source of room illumination.

Army Aeromedical Standard.

PIP: 0-2 errors and passes PIP2 series/F2 single plate

FALANT: no errors in one run (9 pairs)

Step-By-Step Procedure (see APL for algorithm).

PIP Series (Pseudo-Isochromatic Plates) is **DONE FIRST**:

- Examiner instructs subject to, "Please read the numbers aloud" (or words to that effect). The subject is not allowed to trace the numbers or touch the test plates.
- Examiner must show the demonstration plate(s) first, then show the remaining 14 test plates, showing each for approximately 2-4 seconds. Do not count the demonstration plate(s) in scoring.
- With the exception of always showing the demonstration plate(s) first, the examiner may change the order of the plates if there is suspicion of memorization. However, do not 'mix and match' test plates from multiple tests. (In a multiple-subject environment, do not allow those waiting to test to overhear the responses to the PIP.)
- A patient fails PIP testing if there are three (3) or more errors on the PIP or fails PIP2 series/F2 single plate. Proceed to FALANT testing.
- Record the results as the number MISSED over the number possible. For example, a perfect score on the PIP would be:
 - 'PIP 0/14 PASS'

FALANT (Farnsworth Lantern) or the OPTEC-900 Color Vision Tester (**done only if failed PIP series**):

- Instruct the patient that he/she will be seeing sets of two lights in combinations of the colors red, green, and/or white. The lights are oriented vertically and the subject is to respond with the colors seen in order from top to bottom.
- It is advisable to provide the subject with a 'trial set' to allow the patient to understand the test before proceeding; do not record this set.
- Present nine (9) pairs of light sets. The first set presented should be a RED-GREEN or GREEN-RED combination but the remaining eight sets should be in random order. Each set of lights should be presented for approximately two (2) seconds.
- An error is considered the miscalling of one or both of a pair of lights. If an examinee changes the response before the next light is presented, record the second response only.
- A patient is qualified if he/she makes no errors in the nine (9) presentations. IF A CLASS 1 or CLASS 2 aviator, an ophthalmologic evaluation assessing for any color discrimination weakness or abnormality is required and the results must be reported on FDME. See APL on Color Vision Deficiencies.
- A patient is disqualified if he/she misses any of the nine (9) presentations.
 - Retest with an additional 18 light pairs is no longer authorized for FDMEs
- Record the results as the number MISSED over the number possible. For example, a perfect score on the FALANT or OPTEC 900 would be:
 - 'FALANT 0/9 PASS' or 'OPTEC-900 0/9 PASS'

Refer to Eye Clinic if subject fails color vision testing:

- misses three (3) or more of 14 test plates with PIP and/or fails F2 single plate or PIP2 series
- misses any of nine (9) test light pairs with the FALANT or OPTEC 900

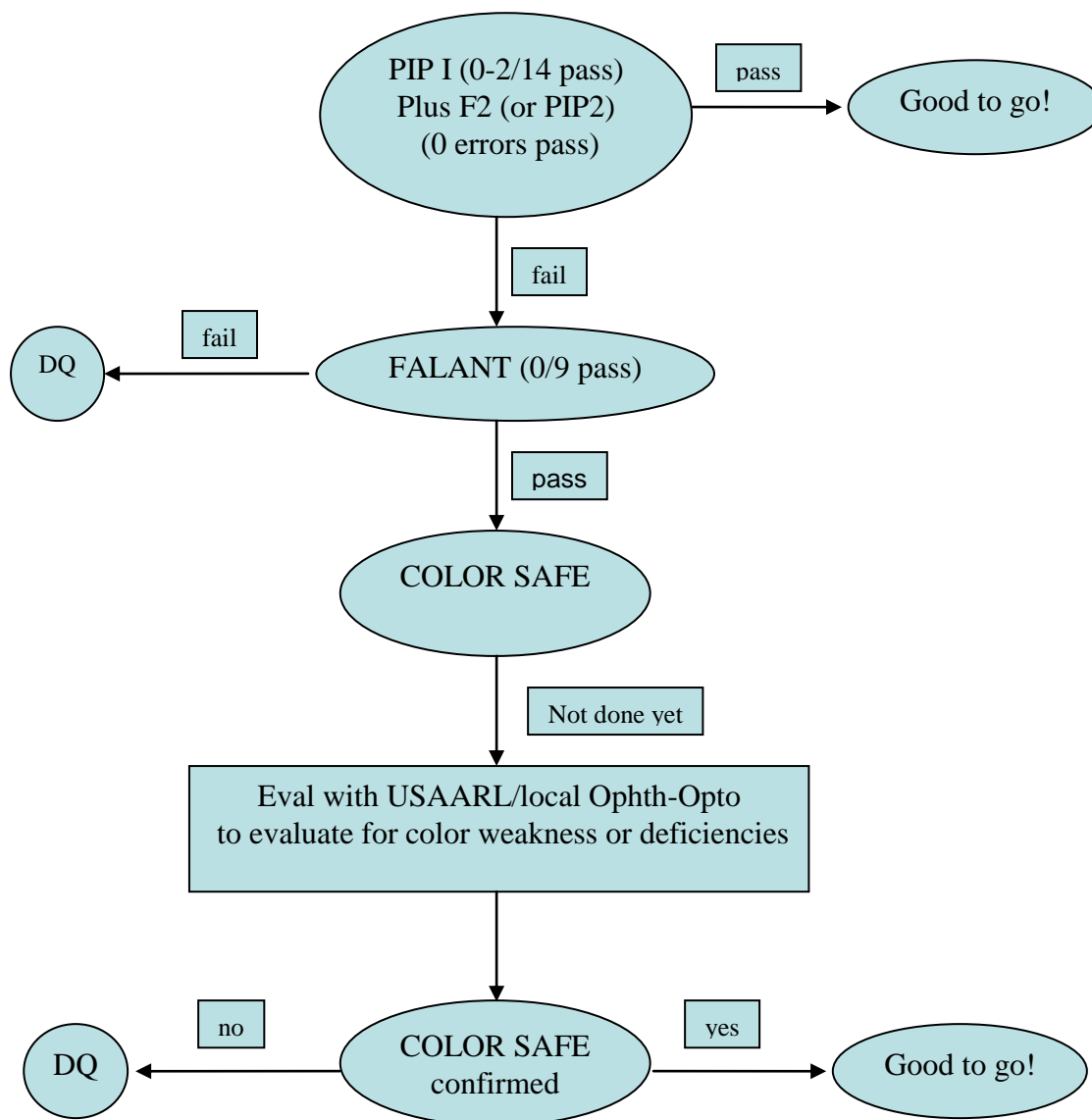
DISCUSSION: The importance of color vision has been a recent focus of tri-service attention with more advanced cockpit designs incorporating color symbology. More conditions and medications are being waived which may affect color vision (i.e., Viagra). The pilot population is also aging, which increases the small risk of acquired color vision deficiencies. Previously, color vision testing was only done on initial FDMEs. The requirement for color vision testing has been revised and updated. Color vision testing is now required for all initial, comprehensive, and post-mishap FDMEs. The standards have been tightened for PIP testing to 2 or less errors allowable and passing the PIP2/F2 single plate. Any more than 2 errors on PIP or failing the PIP2/F2 plate requires passing of FALANT (0/9) and a comprehensive ophthalmology/optometry evaluation to better define color discrimination tendencies and weaknesses. Aircrew passing FALANT are still deemed "color safe" which parallels the US Navy aeromedical standard. The USAF aeromedical standard is "color normal." Passing FALANT, the second screen test, is the acceptable standard for "color safe" determination **after** optometric/ophthalmologic evaluation for better defining color vision weaknesses, if any exist.

Those rated aviators failing both tests would require further evaluation IAW the APL with the note that rated aircrew would more than likely receive waivers based on demonstrated ability. Those applicants failing both tests may be offered further evaluation IAW the APL to rule-out false results, and if confirmed, most would not be recommended for exception to policies. Applicants passing the initial Class 1 FDME but failing during the Rucker RW/RO FDME would follow similar evaluation as above with the addition of anomaloscope evaluation with USAARL Vision Sciences Division to best define color vision anomalies.

The ultimate goal of this change is to be able to continue to assess, train, and maintain Army aviators with current airframes that are color normal and mildly weak (but “color safe”) but able to perform the current Army aviation mission while knowledgeable and prepared for the future changes and advance in cockpit design.

The addition of the PIP2 or F2 is new. Most optometry clinics will not have this plate at the time of posting and will need to order it. With isolated blue-yellow deficiencies being rare, unless clinically evident, FS/APA/AMNP/AMEs may annotate the lack of PIP2 or F2 plate availability during the completion of FDMEs.

Algorithm:



ATB: CYCLOPLEGIC REFRACTION(DD Form 2808, Block 62, 'REFRACTION BY AUTOREFRACTION OR MANIFEST')**Important note concerning the current DD Form 2808 for HARDCOPY (paper) submissions.**

Unfortunately, the pre-printed wording of block 62, "REFRACTION BY AUTOREFRACTION OR MANIFEST" may be very confusing. It is VERY important that anyone conducting testing for any FDME understand that an 'autorefraction' of any kind is NOT authorized and should NEVER be entered on the DD Form 2808 unless it is in block 60 (Other Vision Test) or in block 73 (Notes) for reference only. **Autorefraction results should NEVER be entered into block 62!** With AERO, enter information on page 2A of DD Form 2808 with additional notes on page 2B.

We highly recommend lining through the entire "BY AUTOREFRACTION OR MANIFEST" wording and utilize the blank next to the refraction to enter the type of refraction utilized. For example:

By -0.50 S. -0.25 CX 180 (type of refraction here)



All 'autorefraction' entries on FDME's in block 62 will be returned as incomplete.

Purpose/Indications: Cycloplegic Refraction ("Cyclo"):

Testing is MANDATORY for all Class 1 FDMEs. This measures a patient's refractive error in the absence of accommodation (focusing ability), which is useful in confirming the presence of latent hyperopia ("hidden farsightedness"). This is accomplished through the use of a cycloplegic topical ophthalmic solution, an anticholinergic solution that is used to block the responses of the iris sphincter muscle and the accommodative muscle of the ciliary body to cholinergic stimulation, producing pupillary dilation (mydriasis) and paralysis of accommodation (cycloplegia).

An Optometrist or Ophthalmologist must conduct the cycloplegic refraction in a very specific manner outlined under the step-by-step procedure below. Conduct the cycloplegic refraction after all other eye testing.

Note: there is additional mandatory testing with the cycloplegic refraction as outlined on the last page.

Equipment/Supplies: Cycloplegic Refraction.

- Slit lamp biomicroscope
- Facial tissue(s)
- Mydriatic spectacles (disposable sunglasses)
- Topical anesthetic: (Proparacaine Hydrochloride Ophthalmic Solution, USP, 0.5%)
- Cycloplegic agent: (Cyclopentolate Hydrochloride Ophthalmic Solution, USP, 1.0%)
- Retinoscope (for objective start point or objective verification; an autorefractor may be used for an objective start point but in no instance will any autorefraction be entered onto an exam form.)
- Phoropter
- Projected Snellen distance visual acuity chart [must be projected IAW [AR 40-501](#), paragraph 4-12, a(1)].
Projected sources for a cycloplegic refraction include, but are not limited to:
 - Traditional projector with screen
 - Binocular Visual Acuity Tester (BVAT), or similar system
 - Refraction system with projected image (i.e. the Marco Nidek COS-1000 Compact Ophthalmic System, the Marco Nidek EPIC-2100, or similar system)
- Method for keratometry and/or topography (for new mandatory testing)

Set-up: Cycloplegic Refraction.

- Conduct a cycloplegic refraction after completing all other eye testing and verifying any disqualifying parameters from other tests. Highly recommend a brief review of the physical exam form to ensure all other eye

testing is complete and that no re-testing is necessary (i.e. meets standards). One more check in the process will only help to ensure the physical is correct when finally forwarded to AAMA for review.

- Highly recommend using a slit-lamp biomicroscope to ensure patient has open anterior chamber angles before instilling any drops.

If an angle estimation is less than 0.25:1 (or ¼:1), or a Van Herick angle estimation of ‘1’, perform gonioscopy prior to instilling cycloplegic drops. If corneal epithelial disruption occurs with gonioscopy, confirm angles are open and have patient return in 24 hours for the cycloplegic refraction. If angles are narrow, refer to Ophthalmology for evaluation before proceeding.

- Ask patient about allergies, adverse reactions to any anesthetics (Proparacaine being utilized), or adverse reactions to any preservatives (Proparacaine is preserved with Benzalkonium Chloride, 0.01%).

Step-By-Step Procedure: Cycloplegic Refraction (“Cyclo”).

- Recommend verifying anterior chamber angles (see Set-Up).
- Verify allergies and possible adverse reactions (see Set-Up).
- Give patient a facial tissue and a pair of mydriatic spectacles. Explain effects from cycloplegic drops (especially temporary loss of focus at near and light sensitivity) and ensure this will not interfere with anything of pending importance (i.e., patient has final exam that evening, patient is not performing any type of flight duties within the following 24 hours, etc.).
- Instill drops in this exact order:
 - Instill one (1) drop of topical anesthetic (Proparacaine HCl 0.5%) into each eye. **RECORD THE DROP AND THE TIME** (in block 60 or block 73). Wait one (1) minute. {Some think this is to make the patient more comfortable with the successive drops. Although this is a welcomed side effect, it is not the primary reason. The topical anesthetic helps ease the bonds between the corneal cell junctions, which allows increased permeability of the cycloplegic agent.}
 - Instill one (1) drop of cycloplegic agent (Cyclopentolate HCl 1.0%) into each eye. **RECORD THE DROP AND THE TIME** (block 60 or block 73). Wait five (5) minutes.
 - Instill one (1) drop of cycloplegic agent; wait a minimum of 45 minutes. **RECORD THE DROP AND THE TIME** (block 60 or block 73).
- Perform a cycloplegic refraction between 45 minutes and 75 minutes after the last drop instillation (the minimum wait time of 45 minutes ensures all iris colors are in maximal cycloplegia before refraction). If the cycloplegic refraction cannot be performed between 45 and 75 minutes, there are two courses of action:
 - Instill another drop of Cyclopentolate HCl 1.0% in each eye and wait a minimum of 30 minutes more; **-or-**
 - Patient can return after a minimum of 48 hours to repeat the drop series and cycloplegic refraction.
- Enter the ‘best corrected visual acuity’ in block 61 next to the pre-printed “Corr. to 20/” entries for each eye. [See ‘Important Note for Eye Care Providers’ on the last page.] Be aware of patients ‘memorizing’ the eye chart. Many clinics are limited to only a few 20/20 lines and must be creative in randomizing the letters (reading them backwards, etc.).
- Record the cycloplegic refraction findings for each eye in block 62:
 - The ‘sphere’ amount in the first blank (between the pre-printed entries of “By” and “S.”). If zero, use ‘0.’
 - The ‘cylinder’ amount in the second blank (between the pre-printed entries of “S.” and “CX”; if there is no cylinder amount, enter ‘sphere’, ‘sph’, ‘0’ or ‘DS’.)
 - The ‘astigmatism axis’ in the third blank (after the pre-printed entry of “CX”; if there is no astigmatism, enter a horizontal line here.)
 - After the astigmatism axis, write the word ‘cycloplegic’ (or ‘cyclo’) to indicate the refraction conducted.

A typical cycloplegic refraction entry on DD Form 2808:

		59. RED/GREEN (Army Only)	60. OTHER VISION TEST 1 x Proparacaine 0.5% @ 1200 1 x Cyclopentolate 1.0% @ 1201 1 x Cyclopentolate 1.0% @ 1206	
61. DISTANT VISION		62. REFRACTION BY AUTOREFRACTION OR MANIFEST		63. NEAR VISION
Right 20/20	Corr. to 20/20	By +0.25 S. -0.25 CX 180	by Cyclo	
Left 20/25	Corr. to 20/20	By +0.75 S. -0.50 CX 180	by Cyclo	

If the refraction amount is outside of qualifying standards for flight school, make a note to the Flight Surgeon in block 73 or on a separate note. This should be discussed with the Physical Exam Section and Flight Surgeon per local SOP. All Eye Care Providers and Flight Surgeons must know the most current standards and policies for entry to flight school.

ENTRY STANDARDS FOR CLASS 1 FLIGHT DUTY MEDICAL EXAMINATIONS.

Hyperopia less than or equal to **+3.00** diopters of sphere (in any meridian by transposition in either eye)

Myopia less than or equal to **-1.50** diopters of sphere (in any meridian by transposition in either eye)

Astigmatism less than or equal to **+/- 1.00** diopter of cylinder in either eye

Must meet above standards in both plus-cylinder and minus-cylinder formats because of the ability to write a disqualifying cycloplegic refraction as a qualifying one as in the example below. So, to prevent this error, transpose to ensure patient meets standards (spherical equivalent method does not apply). AERO does this automatically, and Table 11 below provides this information. Note: “**B**” is disqualifying, but in the range to consider for an ETP (see the Decreased Visual Acuity APL).

For example: the cycloplegic refraction of $-1.00 - 0.75 \times 180$ (in minus-cylinder format) might appear qualified at first glance. However, after transposition into plus-cylinder format of $-1.75 + 0.75 \times 090$ (in plus-cylinder format), it is apparent that this refraction is disqualifying because the sphere amount exceeds -1.50 .

NOTE: If everything else is normal on the applicant, an ETP may be requested and granted if the cycloplegic refraction is close to standard (within $\frac{3}{4}$ of a diopter) to assess the applicant into flight school. See the Decreased Visual Acuity APL.

Transposition Review:

1. Algebraically sum the sphere and cylinder powers
2. Change the sign of the cylinder power
3. Change the axis by 90 degrees.

Table 11. Cycloplegic Transposition Table for Class 1 FDME

		CYL -1.25	CYL -1.00	CYL -0.75	CYL -0.50	CYL -0.25	DS / SPH	CYL +0.25	CYL +0.50	CYL +0.75	CYL +1.00	CYL +1.25
SPH	-1.75	DQ	DQ	DQ	B	B	B	B	B	B	B	B
SPH	-1.50	DQ	DQ	B	B	B	Q	Q	Q	Q	Q	B
SPH	-1.25	DQ	B	B	B	Q	Q	Q	Q	Q	Q	B
SPH	-1.00	B	B	B	Q	Q	Q	Q	Q	Q	Q	B
SPH	-0.75	B	B	Q	Q	Q	Q	Q	Q	Q	Q	B
SPH	-0.50	B	Q	Q	Q	Q	Q	Q	Q	Q	Q	B
SPH	-0.25	B	Q	Q	Q	Q	Q	Q	Q	Q	Q	B
SPH	0.0/PLANO	B	Q	Q	Q	Q	Q	Q	Q	Q	Q	B
SPH	+0.25	B	Q	Q	Q	Q	Q	Q	Q	Q	Q	B
SPH	+0.50	B	Q	Q	Q	Q	Q	Q	Q	Q	Q	B
SPH	+0.75	B	Q	Q	Q	Q	Q	Q	Q	Q	Q	B
SPH	+1.00	B	Q	Q	Q	Q	Q	Q	Q	Q	Q	B
SPH	+1.25	B	Q	Q	Q	Q	Q	Q	Q	Q	Q	B
SPH	+1.50	B	Q	Q	Q	Q	Q	Q	Q	Q	Q	B
SPH	+1.75	B	Q	Q	Q	Q	Q	Q	Q	Q	Q	B
SPH	+2.00	B	Q	Q	Q	Q	Q	Q	Q	Q	Q	B
SPH	+2.25	B	Q	Q	Q	Q	Q	Q	Q	Q	B	B
SPH	+2.50	B	Q	Q	Q	Q	Q	Q	Q	B	B	B
SPH	+2.75	B	Q	Q	Q	Q	Q	Q	B	B	B	DQ
SPH	+3.00	B	Q	Q	Q	Q	Q	B	B	B	DQ	DQ
SPH	+3.25	B	B	B	B	B	B	B	B	DQ	DQ	DQ

DQ = Disqualified

Q = Qualified

B = Disqualified but may be okay for ETP (see APL)

Important Note for Eye Care Providers

A cycloplegic refraction is NOT necessarily equal to the refraction you would give for spectacle lenses. If a patient is “on the border” of being qualified or disqualified, it is best for the Army and for the patient to use the “least amount of prescription needed to see within standards” approach.

For example, if a patient has a cycloplegic refraction that is ± 0.25 diopters outside of standard but can still read to the $20/20^{-1}$ standard with the refraction amount that is WITHIN standards, enter the lesser amount.

Do NOT, however, try to “push” the $20/20^{-1}$ on borderline cases for three reasons. First, the current APL on “Decreased Visual Acuity” addresses policies for Exception to Policy for those within $\frac{3}{4}$ of a diopter of standards. Second, these patients receive an entirely new cycloplegic exam once they come to Fort Rucker to enter flight school. If outside of standards on the RO/RW physical, they will be required to request an exception-to-policy prior to starting training. Use professional judgment, but do not allow someone to come to flight school knowing he/she has a good chance of failing their detailed cycloplegic exam upon arrival and being held up from starting training. The procedures for remedy are in place and too easy.

Additional MANDATORY Testing With Cycloplegic Refraction:

Since the patient is dilated during a cycloplegic refraction, it is a prime opportunity to conduct a brief slit lamp exam to check any disorders of the anterior segment and optic nerve. A fully dilated fundus exam (DFE) is not required but highly encouraged. Note: for refractive surgery patients outside of the standards, a DFE is required as part of the ETP information. Due to the advent and popularity of refractive surgery, it is now **MANDATORY** for the Eye Care Provider conducting the cycloplegic exam to also provide the following information with all Class 1 FDMs:

#1: EVIDENCE OF REFRACTIVE SURGERY (YES/NO):

- Make an entry in block 73 (NOTES) indicating that there is no evidence of refractive surgery. (Highly advise that the patient also sign an entry stating he/she has not had refractive surgery.) This can easily be made part of the local overprint to DD Form 2808. This block is included on page 2A, DD Form 2808 on AERO.
- If patient has had refractive surgery, see the APL for Corneal Refractive Surgery (updated Feb 2007) and the required information listed in Table 6. Ensure the patient can supply all of the information required for an ETP or Qualified, Information Only. If the patient is missing the information or records, contact USAAMA to discuss the case to determine how to proceed. Allowable procedures include PRK, LASEK, and LASIK. All other forms of corneal refractive surgery are not authorized.

#2: EVIDENCE OF CORNEAL CURVATURE: Provide evidence of corneal curvature with one of the following:

- Manual or Automated Keratometry readings of each eye [enter in block 60 (OTHER VISION TEST) or block 73 (NOTES); or photocopy to full-size page and attach to physical with assessment annotated.
- And/or Topography of each eye (attach full-size page to physical) with assessment annotated.
- If abnormal or concerning (keratoconus, pre-keratoconus or suspect, or other), annotate and inform the aeromedical provider and physical exam clinic. Continue the evaluation per appropriate APL or discuss with the aeromedical provider or USAAMA findings and guidance for further evaluation.

Important Note for Eye Care Providers and Aeromedical Providers for Class 1 Applicant vision:

With the advent and successful of the Corneal Refractive Surgery program, to include its adoption for most individuals as an Information Only disposition, this excluded otherwise qualified applicants whose visual testing was just outside of standards but not significant enough to warrant the risk, expense, or appropriateness of undergoing the CRS procedure. The Army aeromedical standards are and remain the following:

1. Distant visual acuity (DVA): $20/50$ or better in each eye (and correctable to $20/20^{-1}$)
2. Near visual acuity (NVA): $20/20^{-1}$ in each eye uncorrected.
3. Cycloplegic: Per Table 11

For Exception to Policy, in coordination with HRC waiver Authority, an applicant may be considered providing meeting all of the following: DVA $20/70$ or better in each eye and correctable to $20/20^{-1}$, NVA $20/40$ or better in each eye and correctable to $20/20^{-1}$, and cycloplegic refraction with 0.75 diopters of the aeromedical standards (noted as “B”). See the APL, Decreased Visual Acuity.

ATB: DA FORM 4186 USAGE

1. What is a DA Form 4186?

DA Form 4186 is a required official means by which a flight surgeon informs an aviation commander that military and civilian personnel are medically fit to perform Army aviation duties.

2. Who needs a DA Form 4186?

The DA Form 4186 applies to all aviation personnel, including Department of the Army civilian (DAC) pilots, civilian contractor pilots, and military and civilian air traffic controllers (ATC). It is required for all personnel who must meet Army Class 1, 2, 3, or 4 medical fitness standards. Civilian contract pilots who maintain a valid FAA Class 2 and Form 8500-9 certificate and civilian contract crewmembers who maintain a FAA Class 3 medical certificate do not require a DA Form 4186. Aviators in non-operational positions must complete a Class 2 flight physical and a DA Form 4186 issued annually ([AR 600-105](#)). Aviators in "simulator duty only" positions are required to maintain a current DA Form 4186.

3. Who prepares a DA Form 4186?

Any medical or dental officer, who must inform a commander of the status of an aircrew member, may prepare and sign a DA Form 4186 recommending temporary medical suspension (DNIF). A recommendation returning the aircrew member to flying duties (FFD) must be signed by a flight surgeon; aeromedical physician assistant (APA); aeromedical nurse practitioner (AMNP); aviation medical examiner (AME). **Note:** with update to AR 40-501 (specifically 6-11e, 6-11h, and 6-11j(2)), APAs and AMNPs may issue the 4186 without flight surgeon co-signature.

4. When is a DA Form 4186 Issued?

The DA Form 4186 is to be completed:

- a. At the time of periodic examination (FDME/FDHS).
- b. After an aircraft mishap.
- c. When reporting to a new duty station or upon being assigned to operational flying duties. This includes changing units or companies at the same duty station, changing from "simulator only" to full flying duties (FFD), or returning from a deployment if assigned to a different commander's Aircrew Training Program (ATP) during the deployment.
- d. When admitted to a medical treatment facility, sick in quarters, or entered into a drug or alcohol rehabilitation program ([AR 600-85](#) and [AR 40-8](#)).
- e. When returned to flying status following (d) above.
- f. When treated as an outpatient for conditions or with drugs which are disqualifying for aviation duty. (See APLs, AR 40-501, and [AR 40-8](#))
- g. When being returned to flying status following restriction imposed under (f) above.
- h. Other occasions, as required.

5. How is the DA Form 4186 Prepared? The hard copy DA Form 4186 is prepared in three copies.

TO and FROM block

Found only on the top portion of the form. These blocks contain the mailing address of the individual's commander that the DA Form 4186 is being sent TO, and the mailing address of the flight surgeon the DA Form 4186 is FROM.

The next line contains blocks one through five that contain identifying data about the examinee.

Enter the type of flying duty performed in block six. For example: Aviator, flight surgeon, APA, crewchief, flight medic, or ATC.

Section A - Qualifying action

If the examinee is qualified to perform flying duties in accordance with chapters 2 and 4, [AR 40-501](#), the flight surgeon completes section A, Qualifying Action Recommended by Medical Authority. Indicate the reason(s) for the medical clearance recommendations in blocks 7a thru 7h (more than one box may be selected). Further explanation of each item should be explained *as appropriate* in Block 14: Remarks.

Regulations require the examinee's vision must be 20/20⁻¹ both near and far. Check the "No" block in block eight if the examinee's vision is 20/20⁻¹ uncorrected and they do not wear spectacles. Check the "Yes" block if the examinee is required to wear spectacles. Enter the effective date of the medical recommendation in block nine. Enter the date the medical clearance expires in block ten

Section B - Disqualifying action

Disqualifying action recommended by medical authority is completed when the examinee is found medically unfit for flying duties in accordance with the APLS and/or chapters 2 and 4, [AR 40-501](#), or is medically disqualified because of a temporary medical problem or medication. Only one box may be selected. For a temporary disqualification seen with a typical sick call problem, mark Block 11 with a temporary medical suspension ([AR 600-105](#)). The estimated time the examinee will be grounded is entered in block 12, and the effective date of medical incapacitation is entered in block 13. The date of medical incapacitation is the date the disqualifying medical condition was diagnosed by history, examination, tests, or consultation. *It may precede* the date the DA Form 4186 was actually completed by the flight surgeon.

If the medical incapacitation is expected to last more than 365 days without waiver, termination from aviation service (permanent medical suspension) is required ([AR 600-105](#)). An AMS should be prepared and submitted for completion of permanent suspension.

Block 14 – Remarks

Use Remarks section, block 14 to communicate to the commander about special requirements of the medical recommendations. Use Block 14 for comments such as "FFD Annual FDME (or FDHS) Completed", or if arriving at a new duty station remarks such as "FFD Current FDME (or FDHS) on file", or "Temporary FFD 30 days pending receipt of FDME (or FDHS) by Ft. Rucker" or "Temporary FFD 90 days pending in-cockpit evaluation." Information in block 14 shall not conflict with HIPAA—although it is the commander's approval, the form is stored in the IFRF.

Block 15

Use this block only if the crewmember is grounded. Specify whether the examinee may perform simulator duties and/or ground run up duties. If placed on quarters, ground run up and simulator duties would not be wise. If your examinee has a cast, ground run-up duties might not be allowed, but simulator duties might be authorized. Generally speaking, simulator duties can be authorized anyone who can safely get into the simulator, such as uncomplicated pregnancy. Ground run-up duty is specifically authorized when controls can be safely managed despite medical restriction from flying duty.

Type (print or stamp) the name of the flight surgeon signing the DA Form 4186 and making the medical recommendation in block 16. Put the signature in block 17 and the date the DA Form 4186 was signed by the flight surgeon in block 18. This date can be different than the effective date in block 9 or 13, or in section C. If the DA Form 4186 is completed by a medical officer who is not an aeromedical provider, the wording "flight surgeon" is to be lined out.

Section C - CERTIFICATION BY AIRCREW MEMBER.

The examinee completes Section C when informed of the recommendations contained in sections A or B of the DA Form 4186. The examinee will check the "may" or "may not" block as appropriate, sign and date the form in blocks 19, 20, and 21. If the aircrew member is not available, these blocks may be left blank. If the aircrew member refuses to sign, a notation to that effect should be made in block 14, Remarks, and the commander notified immediately.

The top copy of the DA Form 4186 is then filed per AR 40-66 and constitutes the medical recommendation pending the commander's signature. The rest of the packet is sent to the aircrew member's commander by a distribution system agreed upon by the aeromedical provider and commander(s). The most expedient means is usually hand carried by the individual.

The examinee's unit commander will complete section D by checking either the "approved" or "disapproved" block, and signing and dating the form in blocks 22 and 23. **Note: Commanders are not authorized to sign their own DA Form 4186.** This is per TC 1-210, paragraphs 1-16, 1-17, and 1-20, and AR 95-1, paragraph 4-10a(1)(a). The completed form is distributed as follows:

- a. Commander's Copy/Original - Forwarded for inclusion in the flight records IAW AR 95-1.
- b. Individual Copy - Given to the individual for flight-line verification and personal records.
- c. Medical Record Copy - Filed in the medical records.

6. How are the DA Form 4186 and related forms filed in the outpatient medical record?

File the most recent DA Form 4186 IAW AR 40-66, chapter 5-21b(6): "File the most recent DA Form 4186 according to figures 5-1 and 5-2." The current DA Form 4186 shall be on top. The remaining DA Form 4186s should follow in descending chronologic order. Once the annual flight physical is completed, the new 4186 shall be placed on top, and the previous 4186s may be removed and destroyed or given to the aircrew member. Maintain in the health record any additional DA Forms 4186 that the flight surgeon determines to be required as a permanent record next ("Permanent Record" shall be in Remarks section of such 4186s). Block 8b of DD Form 2766 will be updated in pencil to show the current flying status."

7. Extensions.

The DA Form 4186 may be used by the flight surgeon to extend a currently valid medical examination clearance for a period not to exceed 1 month beyond the end of the birth month for the purpose of completing an examination begun before the end of the birth month ([AR 600-105](#)). In this case block 7(h), "Other" in section A will be checked and in block 14, "Remarks" will appear the statement "FFD – Extension to complete annual FDME (or FDHS)." Block 10 will be dated appropriately. Extensions requested after the birth month will not be granted.

Exception to the Extension Rule ([AR 600-105](#)). Medically disqualified aircrew members have 365 days to complete their flight physical and request a waiver to continue flying duties despite the disqualification. Medical termination from aviation service is mandatory if the condition is not waivable within 365 days ([AR 600-105](#)), or is found to be non-waivable based on [AR 40-501](#), policy letters (APLs) or consultation with USAAMA.

8. Alternate DA Form 4186s.

Interservice and international agreements with allies permit the use of forms equivalent to the DA Form 4186 when the patient is examined by a non-U.S. Army flight surgeon.

ATB: FIELD OF VISION TESTING

(DD Form 2808, Block 68. 'FIELD OF VISION')

Purpose/Indications.

Mandatory for all initial FDMes. This screens for gross visual field defects.

Equipment.

- Occluder (and/or use palm of hand to cover respective eye).
- Examiner's fingers.

Set-Up.

- Patient removes glasses (if applicable).
- Adequate lighting.
- Ideal lighting is bright illumination between patient and examiner with dim room illumination; avoid patient facing any direct source of light.
- Examiner is 60-80 centimeters (cm) from patient.
- Examiner must have full visual fields to be able to properly conduct this test.

Step-By-Step Procedure.

- *This is a monocular test*; ensure you are testing only one eye at a time.
- Instruct the patient to cover his/her left eye first; you, as the examiner, cover your right eye (mirror-imaging patient).
- Tell the patient, "I want you to keep looking at my open eye and, without looking anywhere else, use your 'side vision' and tell me how many fingers I am holding up." (Or, words to that effect.)
- Place your closed fist in the peripheral visual field in a location where you will be able to distinguish the number of fingers exposed.
- Present one, two, or five fingers in the plane mid-way between you and the patient; the fingers should not point toward the patient and you should not wiggle or move.
- Repeat the presentation of fingers in the appropriate eight locations in the field (on each side of the four visual field meridians).
- Repeat the entire procedure for the patient's left eye.
- If the patient successfully answers all presentations within the field, record the findings for each eye even though there is no longer a separate entry block on the new DD Form 2808 for each eye.
 - For example:

OD FTC OS FTC

[FTC = "Full To Confrontations"]

- or -

Right NTC Left NTC

[NTC = "Normal To Confrontations"]

Refer any deficiencies or abnormal findings to the Eye Clinic for verification and possible further testing.

ATB: MANIFEST/SUBJECTIVE REFRACTION(DD Form 2808, Block 62, 'REFRACTION BY AUTOREFRACTION OR MANIFEST')**Important note concerning the current DD Form 2808 for HARDCOPY (paper) submissions.**

Unfortunately, the pre-printed wording of block 62, "REFRACTION BY AUTOREFRACTION OR MANIFEST" may be very confusing. It is VERY important that anyone conducting testing for any flight physical understand that an 'autorefraction' of any kind is NOT authorized and should NEVER be entered on the DD Form 2808 unless it is in block 60 (Other Vision Test) or in block 73 (Notes) for reference only. **Autorefraction results should NEVER be entered into block 62!** With AERO, enter information on page 2A of DD Form 2808 with additional notes on page 2B.

We highly recommend lining through the entire "BY AUTOREFRACTION OR MANIFEST" wording and utilize the blank next to the refraction to enter the type of refraction utilized. For example:

By -0.50 S. -0.25 CX 180 (type of refraction here)



All 'autorefraction' entries on FDME's in block 62 will be returned as incomplete.

The terminology of 'cycloplegic', 'subjective', and 'manifest' can be confusing when it comes to FDME/FDHSs. For standardization, this guide explains how these entries are commonly utilized:

Terminology	Class of Physical	When Indicated
'Cycloplegic'	Class 1 only (drops given)	Class 1 FDME only [See ATB-Cycloplegic Refraction]
'Subjective' or 'Manifest'	All classes except Class 1 (no drops given) (phoropter used)	Corrected vision with current glasses (HxRx) or uncorrected vision with no previous use of glasses worse than 20/20 ⁻¹ in either eye at distance <u>or</u> near.
'Hx Rx' * [Hx = 'habitual' or 'historical'] = current glasses	All classes except Class 1 (no drops given) (lensmeter used)	Corrected vision with current glasses (HxRx) at least 20/20 ⁻¹ in each eye at distance <u>and</u> near.

* Some use the term 'manifest' to mean 'HxRx' also. See 'Notes About Manifest Refraction' on the last page of this ATB.

Purpose/Indications

Needed for all classes of FDME/FDHS, other than Class 1 (requires cycloplegic refraction), if the patient is not 20/20⁻¹ in each eye uncorrected in both near and far vision. This measures a patient's refractive error without the use of a cycloplegic agent (no drops) as well as obtains the eyeglass prescription needed to bring the corrected vision to 20/20⁻¹ in each eye. This is often missed or omitted on FDHSs and comprehensive FDMes, despite AERO reminders.

Equipment/Supplies

- Phoropter
- Projected Snellen distance visual acuity chart [must be projected IAW [AR 40-501](#), paragraph 4-12, a.(1) and b.(1)]. Projected sources for a subjective or manifest refraction include, but are not limited to:
 - Traditional Projector with screen
 - Binocular Visual Acuity Tester (BVAT), or similar system
 - Refraction system with projected image (i.e. the Marco Nidek COS-1000 Compact Ophthalmic System, the Marco Nidek EPIC-2100, or similar system)
- Standard Reduced Snellen near visual acuity card (needed if uncorrected near vision is worse than 20/20⁻¹ in either eye.)

Set-up

A subjective refraction should only be conducted after completing all other eye testing and verifying any disqualifying parameters from other tests. However, it can be done at any time in the physical exam procedure. Highly recommend a brief

review of the physical exam form to ensure any other eye testing completed at that time does not require re-testing (i.e. meets standards). One more check in the process only helps ensure the physical is correct when sent to AAMA for review.

Step-By-Step Procedure

- This is NOT for any Class 1 FDME (cycloplegic refraction will be used for eyeglass prescription if needed).
- Perform a subjective refraction for either distance and/or near depending on the referral criteria and findings in blocks 61 and 63.
- Enter the 'best corrected distance visual acuity' in block 61 and the 'best corrected near visual acuity' in block 63 next to the pre-printed "Corr. to 20/" entries for each eye.
- Record the subjective refraction findings for each eye in block 62:
 - The 'sphere' amount in the first blank (between the pre-printed entries of "By" and "S." If zero, enter '0' or 'plano'.
 - The 'cylinder' amount in the second blank (between the pre-printed entries of "S." and "CX"; if there is no cylinder amount, enter 'sphere', 'sph', '0' or 'DS.'
 - The 'astigmatism axis' in the third blank (after the pre-printed entry of "CX"; if there is no astigmatism, enter a horizontal line here.)
 - After the astigmatism axis, write the word 'subjective' (or 'subj') [or the word 'manifest' if using this term interchangeably with 'subjective'] to indicate the type of refraction conducted.
 - If the patient's best-corrected near visual acuity utilizes the same prescription as the best-corrected distance visual acuity, simply enter the word 'lens' next to the pre-printed entry of 'by' under block 63 (NEAR VISION). If the best-corrected near visual acuity utilizes an 'Add' (bifocal), enter the amount of the 'Add' ONLY which will always be a number preceded by a '+' sign.
 - If you know the refraction still does not correct patient to qualifying standards at distance and/or near, perform a full eye exam to try and determine the cause. If undeterminable, refer to Ophthalmology.

A typical ideal subjective refraction entry on DD Form 2808:

		59. RED/GREEN (<i>Army Only</i>)	60. OTHER VISION TEST
61. DISTANT VISION		62. REFRACTION BY AUTOREFRACTION OR MANIFEST	63. NEAR VISION
Right 20/25	Corr. to 20/20	By PLANO S. -0.50 CX 180 by Subj	Right 20/30 Corr. to 20/20 by +1.00
Left 20/30	Corr. to 20/20	By +0.25 S. -0.75 CX 180 by Subj	Left 20/30 Corr. To 20/20 by +1.00

REFERRAL CRITERIA – Subjective/Manifest Refraction:

Class 1 FDME – ALL Class 1 FDMEs receive a cycloplegic exam.

All other classes of FDME/FDHS – refer if either eye's best corrected vision is worse than 20/20⁻¹ at distance or near.

Notes About "MANIFEST REFRACTION"

Over time, with physicals, many have come to use 'manifest refraction' to identify the patient's current spectacle prescription (the glasses the patient is wearing). However, most eye care providers utilize the words 'subjective' and 'manifest' interchangeably and instead use terms such as, 'Hx Rx' or 'Spec Rx' to identify the current spectacle prescription. Therefore, ideally, if the patient meets standards in each eye with his/her current spectacle prescription, it should be entered on the physical in a clear manner as to show that the visual acuity was tested with the current spectacle prescription. This would never be entered for a Class 1 FDME and should be verified by subjective refraction if the prescription is older than one year.

ATB: NIGHT VISION

(DD Form 2808, Block 69. 'NIGHT VISION')

Important note concerning the current DD Form 2808 for HARDCOPY (paper) submission.

The current DD Form 2808 has a pre-printed '(Test used and score)' in block 69. However, there is no established test for night vision and therefore no score. This part of the physical is still conducted through history only. If doubt or concern, refer to optometry/ophthalmology for further evaluation.

Purpose/Indications.

Mandatory for all initial FDMes. Determines history of night vision problems.

Equipment.

None.

Set-Up.

Patient privacy.

Step-By-Step Procedure.

- Ask the patient, "Have you ever had any night vision problems?" (or words to that effect.)
- If the response is negative, record 'NIBH' for 'Not Indicated By History'.
- Any positive responses are ABNORMAL and must be referred to the Eye Clinic for further evaluation and investigation.

ATB: OCULAR MOTILITY

(DD Form 2808, Block 64. 'HETEROPHORIA')

Important notes concerning the current DD Form 2808 for HARDCOPY (paper) submissions.

Unfortunately, there is some confusion about the pre-printed entries in block 64. A quick comparison of the old SF 88 entries and the current DD Form 2808 entries might be useful here:

Old SF 88 Entry	New DD Form 2808 Entry	
ESO	ES°	has degree symbol; do NOT record in degrees
EXO	EX°	has degree symbol; do NOT record in degrees
R.H.	R.H.	no change
L.H.	L.H.	no change
PRISM DIV.	Prism div.	no change except from all capital letters
PRISM CONV.	Prism Conv.	no change except from all capital letters
CT	CT	no change; this is a <u>separate, stand-alone</u> entry even though it is somewhat 'hidden' on the form
PC	NPR	this is a typographic error and should be 'NPC'
PD	PD	no change

Purpose/Indications.

Block 64 includes several sub-tests for ocular motility along with true 'heterophoria' testing, even though the title of the block is 'Heterophoria'. Therefore, each sub-test will be covered separately below. Abnormalities must be evaluated per the APLs to include the Ocular Motility Worksheet.

Heterophoria Testing ['ES°', 'EX°', 'R.H.', 'L.H.']:

Mandatory for all Class 1 and comprehensive FDMes. This measures the latent or relative deviation between the eyes that occurs when fusion is interrupted. A 'phoria' can be lateral ['ES' for 'esophoria' (in), and 'EX' for 'exophoria' (out)] and/or vertical ['R.H.' for 'right hyperphoria', and 'L.H.' for 'left hyperphoria' (do not use 'hypo' entries)]. A 'phoria' does not apply to one eye or the other. It is basically a resting position of the eyes. Everyone has a phoria! But, it might be so small as to come out to zero (0) on testing.

'Tropia' Testing ['CT' (then measured as 'Prism div.' or 'Prism Conv.' if needed)]:

Mandatory for all Class 1 and comprehensive FDMes. A 'tropia' is a manifest deviation of ONE eye and can be lateral and/or vertical with the same prefix identifiers as a 'phoria' ['eso', 'exo', and 'hyper']. 'Tropia' is also known by the names 'heterotropia', 'strabismus', and 'squint'. A tropia applies to only ONE eye or the other at any given time. It can be constant or intermittent; unilateral or alternating. Not everyone has a tropia!

The 'CT' (Cover Test) is required for all Class 1 FDMes. When the 'cover-uncover' (or 'unilateral') cover test is performed properly, this test can detect the presence of a tropia. This is important because the presence of a tropia could lead to lack of fusion, reduced or no stereopsis (affecting depth perception), suppression of vision in one eye, or diplopia (double vision). Obviously, these are all disqualifying conditions for flight school. Passing the previous 'phoria' testing does not necessarily mean a person is without a 'tropia'. But, if a person fails the 'phoria' testing or has difficulty with it, it could be an indicator that the patient may have a 'tropia'. Do not confuse this 'cover-uncover' (or 'unilateral') cover test that tests for 'tropia' with the 'cross-cover' (or 'alternating') cover test, which is utilized by Optometry/Ophthalmology to verify a 'phoria'.

This test is conducted at both distance and near. If any 'tropia' is detected, the patient must be referred to Optometry or Ophthalmology for verification and measurement of the amount of 'tropia' to be entered by the 'Prism div.' (prism divergence) and 'Prism Conv.' (prism convergence) entries. If no 'tropia' is detected, the word "Ortho" is placed next to the preprinted entry of 'CT' [one entry presumes the test was conducted at both distance and near but the proper entry would be "Ortho @ distance and near" (or words to that effect)]. The 'Prism div.' and 'Prism Conv.' entries are left blank if no tropia detected.

NPR [(typo error on DD Form 2808 - should be 'NPC' (Near Point of Convergence))]:

Mandatory for all Class 1 FDMEs. This is the 'NPC' (Near Point of Convergence) test which determines the patient's ability to converge the eyes while maintaining fusion. [Note: there is a test called the 'NPR' (Near Point of Recovery) but that test is NOT utilized in any flight physical.]

PD (Pupillary Distance):

This test is not utilized for flight physicals. However, it is the measurement of the patient's inter-pupillary distance and can be included if known. Otherwise, leave blank.

Equipment:

Heterophoria Testing (ES°, EX°, R.H., L.H.):

- Armed Forces Vision Tester (AFVT) or OPTEC 2300
- (Note: the 'cross-cover' (or 'alternating') cover test and/or the von Graefe method of measuring phorias should only be used for verification of 'phoria' by Optometry/Ophthalmology. Do not confuse the 'cross-cover' test with the 'cover-uncover' (or 'unilateral') cover test that detects 'tropia'.)

'Tropia' Testing (CT – Cover Test):

- Occluder (for 'cover-uncover' (or 'unilateral') cover test)
- Distance and near visual acuity charts (or appropriate targets).
- (Ideally, an appropriate target is an isolated letter on a visual acuity line that is one to two lines larger than the patient's best-corrected visual acuity of the poorer seeing eye. So, if the patient is 20/20, then utilizing a 20/25 or 20/30 isolated letter at both distance and near would be ideal.)

NPR [(typo error on DD Form 2808- should be 'NPC' (Near Point of Convergence))]:

- Any instrument having an appropriate target that is one to two lines larger than the patient's best corrected near visual acuity in the poorer seeing eye; instrument or device must be easy for examiner to manipulate and not interfere with the testing method.
- Metric ruler for measuring in millimeters (mm).

Set-up.

Heterophoria Testing (ES°, EX°, R.H., L.H.):

- Patient seated comfortably at the AFVT (or OPTEC 2300).
- Test emulates distance test (optical infinity).
- Refer to manual for correct settings for model being used.

Tropia' Testing (CT – Cover Test):

- Patient wears habitual spectacle prescription (if applicable) for the distance being tested (distance spectacle prescription when testing distance; near spectacle prescription when testing near).
- Set up the target:
 - Distance (tested at 20 feet or 6 meters) – isolated letter, one to two lines larger than the visual acuity in the patient's poorer seeing eye (with correction). For FDMEs, this will almost always be a 20/25 target.
 - Near (usually tested at 16 inches or 40 cm) – reduced Snellen letter one to two lines larger than visual acuity in the patient's poorer seeing eye (with correction). For FDMEs, this will almost always be a 20/25 target. The patient may hold the target but verify the test distance.
- The examiner holds the occluder.
- Sufficient room illumination to see the patient's eye movements.
- The examiner must be in a position to be able to see the patient's eyes easily without interfering with the patient's view of the target.

NPR [(typo error on DD Form 2808 - should be 'NPC' (Near Point of Convergence))]:

- Patient wears habitual near prescription (if applicable).
- If spectacles interfere with testing, attempt testing without spectacles.
- Sufficient room illumination to see the patient's eyes and for the patient to see the target.

Step-By-Step Procedure.

Heterophoria Testing (ES°, EX°, R.H., L.H.):

- Test distance vertical phoria and lateral phoria in accordance with manual for AFVT or OPTEC 2300.
- Use associated scoring key to determine amount of phoria in prism diopters.
- Vertical phoria must be 1 or less. If a subject has a number other than zero in 'RH', then the 'LH' entry must be zero (and vice-versa).
- Lateral phoria must be 8 or less. If a subject has a number other than zero in 'ES', then the 'EX' entry must be zero (and vice-versa).
- Refer to the Eye Clinic if vertical phoria is greater than 1 or if lateral phoria is greater than 8.

'Tropia' Testing (CT – Cover Test):

- This is the 'cover-uncover' (or unilateral) cover test to test for 'tropia', NOT to test for 'phoria'.
- Test at distance (20 feet) and then near (40 cm).
- Cover and uncover the right eye three times while you:
 - Watch behind the occluder for eye movement
 - Watch for eye movement after occluder is removed
- Repeat for left eye.
- Repeat entire procedure for near.
- No movement detected is recorded as "Ortho" (distance and near).
- Refer to the Eye Clinic for verification if any movement detected.
- Eye Clinic will verify 'tropia' and measure to enter amount into the 'Prism div.' or 'Prism Conv.' entries.

NPR [(typo error on DD Form 2808 - should be 'NPC' (Near Point of Convergence))]:

- This is a binocular test; ensure test is performed with both eyes open.
- Start the fixation target at 40 cm from the patient and ensure he/she sees only one image at that start point before proceeding.
- Explain to the patient to tell you when the target appears 'double' or when it 'splits' into two images; further explain that it does not matter if the target appears 'blurry', only when it 'doubles'.
- Bring the fixation target toward the patient slowly to allow him/her to maintain fixation on the target.
- Observe patient's eyes until the patient reports that the target appears 'double' or 'split'; or until it is apparent that one eye loses fixation (turns in or out).
- Record this distance from the patient's eyes in millimeters (mm).
- Passing is 100 mm or less.
- If greater than 100 mm, first carefully retest with repeat explanation to the patient of reporting only when the image is 'double' or 'splits', not only when the image is 'blurry'. If still greater than 100 mm, refer to Eye Clinic for verification.

ATB: READING ALOUD TEST**Background:**

Administer the reading aloud test (RAT) to aviation training applicants as a standardized assessment of an individual's ability to communicate clearly in the English language, in a manner compatible with safe and effective aviation operations. Current communication systems degrade speech intelligibility. The radio environment separates the speaker and the listener from the benefits of watching lips and body language cues. Those with marginal English skills have problems communicating effectively in the operational aviation environment.

Failure of the screening RAT by applicants with English as their native language may indicate undiagnosed or concealed learning disabilities. Administration of the RAT occasionally reveals immature, indecisive, careless, or excessively introverted personalities, which may indicate a high risk for aviation training failure.

When administered to aviation personnel, to include ATC personnel, the RAT will be used to determine the individual's ability to clearly enunciate, in the English language, in a manner compatible with safe and effective aviation operations.

The RAT appears to be a nonsense story, but was designed as a phonetic exercise. Assessment by the flight surgeon is subjective. Applicants should read the RAT clearly, deliberately, without hesitation, error, or stuttering. The test is scored as "RAT-PASS" or "RAT-FAIL." The examining physician will consult with a local instructor pilot or ATC supervisor in questionable cases. Clear failure may warrant evaluation with a speech pathologist for further testing. Any failure requires an AMS for ETP or waiver consideration with pertinent information.

Procedure:

Have the examinee stand erect, face the examiner across the room and read aloud, as if he/she were confronting a class of students.

If he/she pauses, even momentarily, on any phrase or word, the examiner immediately and sharply says, "What's that?" and requires the examinee to start again with the first sentence of the test. The true stammerer usually will halt again at the same word or phonetic combination and will often reveal serious stammering.

Have the applicant read aloud as follows:

"You wished to know all about my grandfather. Well, he is nearly 93 years old; he dresses himself in an ancient black frock coat, usually minus several buttons; yet he still thinks as swiftly as ever. A long flowing beard clings to his chin giving those who observe him a pronounced feeling of the utmost respect. When he speaks, his voice is just a bit cracked and quivers a trifle. Twice each day he plays skillfully and with zest upon our small organ. Except in winter when the ooze of snow or ice is present, he slowly takes a short walk each day. We have often urged him to walk more and smoke less, but he always answers, "Banana oil!" Grandfather likes to be modern in his language."

ATB: VALSALVA MANEUVER

This is a very simple and quick physical exam technique used to assess gross Eustachian tube function. While the aeromedical provider views the crewmember's tympanic membrane (TM) through an otoscope, the crewmember pinches his nostrils and keeps his mouth closed while exhaling. Since the mouth and nose are closed preventing any air from escaping, the pressure in the nasopharynx increases. If the Eustachian tubes function properly, this increased pressure will open the collapsed Eustachian tubes and this increased pressure will be transmitted to the middle ear cavity. The visible result will be a bulging of the TM during the maneuver. The crewmember will also report he "felt his ears clear." This maneuver is repeated while the FS/APA/AMNP/AME views the contralateral side. Visualization of good TM movement is taken as evidence of good Eustachian tube function.

The crewmember must be coached until he learns this maneuver. One will be surprised how difficult it can be to explain this maneuver to an applicant who has never flown in an airplane and has not had the need to clear his ears previously. Always caution the crewmember to perform the maneuver gently and to stop once he/she feels his ears clear. Too forceful a maneuver could "over inflate" the middle ear cavity and leave the TMs bulging making it impossible to visualize movement of the contralateral TM upon repetition.

Current aeromedical policy requires documentation of the Valsalva on all initial FDMEs for all crewmembers except ATC and UAS operators. Clearly, it is most critical to document good function in the pilot applicant. If not seeing good TM movement during the Valsalva maneuver or the applicant states he/she is unable to clear his ears, a tympanogram should be ordered and if necessary, referral to ENT for further evaluation.

ATB: VISUAL ACUITY TESTING – DISTANT VISION(DD Form 2808, Block 61, 'DISTANT VISION')**Purpose/Indications: Distant vision.**

Mandatory for all classes and types of flight physicals. This measures the best visual acuity at distance (20 feet or 6 meters) **WITHOUT** any kind of correction whatsoever, followed by best-corrected visual acuity at distance **WITH** spectacle prescription (if the patient wears any). **NO** contact lenses allowed during testing and must be removed at least 24 hours prior to examination.

This measures the clarity of vision or the ability of the visual system to resolve detail at distance. A patient's visual acuity at distance depends upon the accuracy of retinal focus, the integrity of the eye's neural elements, and the interpretive faculty of the brain.

It is important to conduct distant visual acuity testing on all patients before near acuity testing. Testing for near visual acuity before distant visual acuity may disadvantage the patient, depending on accommodative (focusing) ability.

Equipment:

- Occluder (to cover one eye at a time)
- Standard **PROJECTED** Snellen Distance Acuity Chart [IAW [AR 40-501](#), para 4-12a(1)] -or-
- AFVT (Armed Forces Vision Tester) or the OPTEC 2300 [both considered projected systems]

Set-up:Projected Snellen Distance Acuity Chart:

- Patient is 20 feet (or 6 meters) from acuity chart with center of chart at approximately eye-level for patient (intention is not to have any extreme angle between the patient and the chart).
- Patient holds occluder and covers eye as directed by tester. Patient may use palm of hand, if necessary, but ensure patient is using the palm, not the fingers, to preclude seeing between the fingers. Patient must keep both eyes open, must not press on either eye, and must not squint.

AFVT or OPTEC 2300:

- Patient is seated comfortably at the AFVT or OPTEC 2300.
- Far letter acuity slide(s) set correctly (see manual).
- Patient must push forehead against bar for internal light to work.

Step-By-Step Procedure.Uncorrected Distant Vision:

- **TEST UNCORRECTED VISUAL ACUITY FIRST!** (This is important because a patient may be able to memorize the letters on the chart with corrected vision and, intentionally or unintentionally, say aloud the smaller letters on the chart when uncorrected, whether or not actually seen by the patient.)
- Observe the patient during testing to ensure no squinting (or at least attempt to observe the patient behind the AFVT/OPTEC 2300).
- Instruct the patient to cover one eye (or occlude the non-tested eye with the appropriate buttons on the AFVT/OPTEC 2300) and direct patient not to squint. By convention, it is best to test the right eye first, then left eye for consistency.

- **IMPORTANT NOTE ABOUT 20/20 DISTANT VISUAL ACUITY STANDARD FOR FDMEs/FDHSs!** Per [AR 40-501](#), paragraph 4-12a(1), "...no more than 1 error per 5 presentations of 20/20 letters, in any combination, on either the Armed Forces Vision Tester (AFVT) or any projected Snellen chart set for 20 feet."
- Issue: AFVT line has 10 letters but is split into two sets of five letters positioned next to each other on the same line. Test the entire line, if desired, but the patient is still only required to get 4 out of 5 letters that are on a 20/20 line to be considered a 'pass' for a flight physical. Therefore, entries of 20/20 or 20/20⁻¹ are both passing entries. Most projected Snellen charts have 6 letters (some have 4, 5, 7, or 8 letters) per line. The regulation allows for presentation of 5 letters "in any combination" so you may meet the requirement. If in question, refer to the Eye Clinic for verification.

- Instruct the patient to, “read the smallest line of letters you can, without squinting” (or words to that effect).
- If the patient reads at least 4 or 5 out of 5 letters on a 20/20 line, record 20/20⁻¹ or 20/20 for that eye, whichever is applicable. Repeat testing for other eye.
- If the patient misses two letters or more out of 5 letters on a 20/20 line, ask patient to read the next larger line of letters; continue this process until patient reads at least 4 out of 5 letters on a line of letters. Then, encourage the patient to read any letters on the next smallest line if they can. Record visual acuity based on standard methods. Repeat testing for other eye.
- For example, if patient reads the entire 20/30 line easily, but can only read two of the letters on the 20/25 line, then record the visual acuity as 20/30+2.

REFERRAL CRITERIA – Uncorrected Distant Vision:

- Class 1 FDME – refer if either eye is worse than 20/50 uncorrected.
- All other classes of FDME/FDHS – refer if either eye is worse than 20/400 uncorrected.

Corrected Distance Vision:

- TEST CORRECTED VISUAL ACUITY AFTER UNCORRECTED.
- For Class 1 FDME, perform the visual acuity WITH spectacle prescription (if wears any) before instilling any drops for the cycloplegic refraction (under separate ATB) to ensure current spectacle prescription is adequate. If patient is not corrected to 20/20 (or 20/20⁻¹), it is advisable to have the Eye Clinic refract the patient to ensure he/she is correctable to standard before the cycloplegic refraction. However, do not record these results in block 61 since all Class 1 FDMEs will receive a cycloplegic refraction by an Optometrist or Ophthalmologist who will enter the patient’s cycloplegic refraction acuity there. Therefore, record the results in block 60 or block 73, if desired, but ensure these results to not get confused with the cycloplegic results! Leave the ‘Corr. to 20/___’ in block 61 blank if Class 1 FDME.
- For all other classes of FDMEs/FDHSs, repeat the distant visual acuity procedure for the right eye WITH distance spectacle correction if patient wears any (NO contact lenses!). Patient should be wearing the glasses he/she uses with aviation duties. For bifocal wearers, be certain patient is looking through the distance portion of the spectacles. For progressive bifocal wearers, also ensure patient is angled correctly for optimal visual acuity. Ensure the spectacles worn are not a “reading only” prescription before proceeding with distant visual acuity testing. If patient was at least 20/20⁻¹ at distance without correction, this test can be skipped and a horizontal line drawn next to “Corr. to 20/--“.
- Repeat procedure for the left eye for corrected distant visual acuity.

REFERRAL CRITERIA – Corrected Distant Vision:

- Class 1 FDME – must see Optometrist or Ophthalmologist for cycloplegic refraction.
- All other classes of FDME/FDHS – refer if either eye is worse than 20/20-1 with correction.

ATB: VISUAL ACUITY TESTING – NEAR VISION

(DD Form 2808, Block 63, ‘NEAR VISION’)

Purpose/Indications: Near vision.

Mandatory for all classes and types of flight physicals. This measures the best visual acuity at near (14 inches, 16 inches, or 40 cm, depending on test used*) WITHOUT any kind of correction whatsoever, followed by best-corrected visual acuity at near WITH spectacle prescription (if the patient wears any). NO contact lenses allowed during testing and must be removed at least 24 hours prior to examination.

This measures the clarity of vision or the ability of the visual system to resolve detail at near. A patient’s visual acuity at near depends upon the accuracy of retinal focus, the integrity of the eye’s neural elements, and the interpretive faculty of the brain. Near visual acuity also depends upon the eye’s ability to focus clearly for objects at closer distances (accommodation).

It is important to conduct near visual acuity on all patients after distant acuity testing. Testing for near visual acuity before distant visual acuity may disadvantage the patient, depending on accommodative (focusing) ability.

Equipment:

- Occluder (to cover one eye at a time)
- Standard **PROJECTED** Snellen Distance Acuity Chart [IAW [AR 40-501](#), para 4-12a(1)] -or-
- AFVT (Armed Forces Vision Tester) or the OPTEC 2300 [both considered projected systems]

Set-up:

Standard Reduced Snellen Acuity Card:

- Patient is at the designated test distance from the Reduced Snellen Acuity Card (test distances may vary so ensure the test distance is correct; typically they are set for 16 inches, 14 inches, or 40 cm*). There should be adequate illumination, with the light source either above or slightly behind the patient. Care should be taken so that the light is not directed toward the patient’s eyes.
- Patient holds occluder and covers eye as directed by tester. Patient may use palm of hand, if necessary, but ensure patient is using the palm, not the fingers, to preclude seeing between the fingers. Patient must keep both eyes open, must not press on either eye, and must not squint.

AFVT or OPTEC 2300:

- Patient is seated comfortably at the AFVT or OPTEC 2300.
- Near letter acuity slide(s) set correctly (see manual).
- Patient must push forehead against bar for internal light to work.

Step-By-Step Procedure.

Uncorrected Near Vision:

- TEST UNCORRECTED VISUAL ACUITY **FIRST!** (This is important because a patient may be able to memorize the letters on the chart with corrected vision and, intentionally or unintentionally, say aloud the smaller letters on the test when uncorrected, whether or not actually seen by the patient.)
- Observe the patient during testing to ensure no squinting (or at least attempt to observe the patient behind the AFVT/OPTEC 2300).
- Instruct the patient to cover one eye (or occlude the non-tested eye with the appropriate buttons on the AFVT/OPTEC 2300) and direct patient not to squint. By convention, it is best to test right eye first, then left eye for consistency.

- **IMPORTANT NOTE ABOUT 20/20 NEAR VISUAL ACUITY STANDARD FOR FDMES/FDHSs!** Per [AR 40-501](#), paragraph 4-12a(2), "...no more than 1 error per 5 presentations of 20/20 letters, in any combination, on the AFVT or any Snellen near visual acuity card."
- Issue: AFVT line has 10 letters but is split into two sets of five letters positioned next to each other on the same line. Test the entire line, if desired, but the patient is still only required to get 4 out of 5 letters that are on a 20/20 line to be considered a 'pass' for a flight physical. Therefore, entries of 20/20 or 20/20⁻¹ are both passing entries. Most Snellen cards have 8 letters (some have 5, 6, or 7 letters) per line. The regulation allows for presentation of 5 letters "in any combination" so you may meet the requirement. If in question, refer to the Eye Clinic for verification.

- Instruct the patient to, "read the smallest line of letters you can, without squinting" (or words to that effect).
 - If the patient reads at least 4 or 5 out of 5 letters on a 20/20 line, record 20/20⁻¹ or 20/20 for that eye, whichever is applicable. Repeat testing for other eye.
 - If the patient misses two letters or more out of 5 letters on a 20/20 line, ask patient to read the next larger line of letters; continue this process until patient reads at least 4 out of 5 letters on a line of letters. Then, encourage the patient to read any letters on the next smallest line if they can. Record visual acuity based on standard methods. Repeat testing for other eye.
 - For example, if patient reads the entire 20/30 line easily, but can only read two of the letters on the 20/25 line, then record the visual acuity as 20/30+2.

REFERRAL CRITERIA – Uncorrected Near Vision:

- Class 1 FDME - refer if either eye is worse than 20/20⁻¹ uncorrected at near; patient requires cycloplegic exam also but must be no worse than 20/20⁻¹ uncorrected at near.
- All other classes of FDME/FDHS – refer if either eye is worse than 20/400 uncorrected.

Corrected Near Vision:

- **TEST CORRECTED VISUAL ACUITY AFTER UNCORRECTED.**
- For Class 1 FDME, normally there is no need to perform near visual acuity WITH spectacle prescription at all because Class 1 FDMES should all have 20/20 or 20/20⁻¹ uncorrected near visual acuity in each eye. If this is not the case, an ETP will be necessary.
- For all other classes of FDME/FDHS, repeat the near visual acuity procedure for the right eye WITH near spectacle correction if patient wears any (NO contact lenses!). Patient should be wearing the glasses he/she uses with aviation duties. For bifocal wearers, be certain patient is looking through the near portion of the spectacles. For progressive bifocal wearers, also ensure patient is angled correctly for optimal near visual acuity. If patient was at least 20/20⁻¹ at near without correction, this test can be skipped and a horizontal line drawn next to "Corr. to 20/--".
- Repeat procedure for the left eye for corrected near visual acuity.

REFERRAL CRITERIA – Corrected Near Vision:

- Class 1 FDME—must see Optometrist or Ophthalmologist for cycloplegic refraction. Class 1 FDME's with a spectacle prescription for near visual acuity require an AMS for ETP consideration.
- All other classes of FDME/FDHS – refer if either eye is worse than 20/20⁻¹ with correction.

ATB: MANAGEMENT OF INTERNATIONAL MILITARY PILOTS AND STUDENT PILOT CANDIDATES

1. DEFINITIONS/ABBREVIATIONS:

- a. Parent Nation: country of origin
- b. Host Nation: country hosting training (for most cases, USA)
- c. STANAG: NATO Standardization Agreement
- d. AR: Army Regulation
- e. PfP: Partnership for Peace
- f. NATO: North Atlantic Treaty Organization
- g. DOD: Department of Defense
- h. DA4186: Medical Recommendation for Flying Duty
- i. IMS: International Military Pilots and Student Pilots

2. REFERENCES:

- a. AR 40-501: Standards of Military Fitness, 29 MAY 2007
- b. AR 12-15: Joint Security Assistance Training, 5 JUN 2000
- c. STANAG 3526, edition 6: Interchangeability of NATO Aircrew Medical Categories, 17 MAY 2005 (promulgated for ratification)

3. INTRODUCTION: Per AR 12-15, 4-19e, International Military Pilots and Student pilots attending US Army flight training are required to meet the appropriate US Army Aviation Class medical standards per AR 40-501, paragraph 4-1c. AR 40-501, paragraph 4-1c specifies that “provisions in this chapter are subject to STANAG 3526...” STANAG 3526 applies to all international personnel from NATO/PfP nations. In contrast, AR 12-15, paragraphs 4-19e-h contains verbiage different from STANAG 3526 stating that all IMS are required to meet US Army Flight Class standards and the examination must be completed by US DOD flight surgeons. As opposed to NATO/PfP IMS, personnel from non-NATO/PfP nations are not covered with STANAG 3526 and must adhere to AR 12-15, paragraphs 4-19e-h. As such, AR 12-15 is in the process of being updated to be consistent with the current STANAG 3526. Until then, the following policies shall be followed and remain in effect until updated or rescinded.

4. GUIDANCE FOR NATO/PfP IMS: IAW NATO/PfP STANAG 3526 edition 6, NATO and PfP IMS members will conduct their normal flight physical examination using their military’s qualified flight surgeons.

a. Parent nations are responsible for standards of primary selection, permanent medical disqualification, and determination of temporary flying disabilities exceeding 30 days.

b. US Army will accept the medical category and qualification for flying status, including the expiration date. Parent nations will provide a medical statement, in English (preferred), documenting the IMS’s medical fitness for flying duties and forward the following:

- i. Latest flight physical report with pertinent medical information.
- ii. Pertinent documentation helpful in case of post-mishap aircrew member identification purposes (fingerprints, dental records, etc.).
- iii. Upon reporting to the US Army training facility, the local US DOD flight surgeon will review the IMS’s medical information, insure there has been no change in medical status, and issue a DA Form 4186, Medical Recommendation for Flying Duty, using the expiration date assigned by the parent nation, for medical clearance for local flying duties.

c. In cases where the expiration date for flying status occurs during training, periodic flight physical examinations will be conducted IAW US Army policies and procedures, and entered in AERO with a comment of “Final Approval from parent nation per STANAG 3526.” A copy of the flight physical report will be forwarded to the appropriate aeromedical authority of the parent nation for review and determination of fitness to fly.

d. While training in the US, if a medical issue is discovered or occurs prior to completion of training, any provider may temporarily ground the IMS until resolution using US Army policies and procedures. Only a US DOD flight surgeon may then return the IMS to flying status. If the grounding condition is of more than 30 days or potentially permanently disqualifying, the case will be referred to the parent nation for action IAW its regulations. The parent nation is responsible for the evaluation and treatment costs per established agreements.

4. GUIDANCE FOR Non-NATO/PfP IMS: If the IMS is not from a NATO/PfP nation, AR 12-15 applies. The IMS will need to meet US Army standards with submission and approval through the US Army Aeromedical Activity (USAAMA), ATTN: MCXY-AER, Building 301, Fort Rucker, AL, USA 36362.

a. If available, a U.S. Army aviation medical examination will be performed by a qualified U.S. DOD flight surgeon before the IMS's departure from his or her home station—funding is outlined in AR 12-15, paragraph 4-19f. A flight student must meet Class 1 standards. A rated aviator must meet Class 2 standards.

b. If a US DOD flight surgeon is not available, a U.S. Army aviation medical examination may be performed by a parent nation flight surgeon and submitted to the US Army Aeromedical Activity for review. A flight student must meet US Army Class 1 flight standards. A rated aviator must meet US Army Class 2 flight standards.

c. Flight physical examinations should be documented in English on DD Forms 2807-1 and 2808 IAW US Army flight standards. The flight physical examination shall be completed as soon as possible and reviewed by USAAMA prior to the IMS reporting for training to prevent cancellation of training due to physical non-qualification. References/forms are at <https://aamaweb.usaama.rucker.amedd.army.mil/>.

d. Host nation waivers for medically disqualifying conditions will be reviewed through the US Army Aeromedical Activity to the appropriate waiver authority at Human Resources Command, as described in (f) below prior to entering training with US Army Aviation.

e. Upon the IMS's arrival at the US Army training location, a US DOD flight surgeon will review AERO and all examinations/applicable waivers prior to completing a DA Form 4186, and prior to the IMS participation in actual aerial flight.

f. If upon arrival to the US Army training location, a new disqualifying defect is discovered, the IMS will undergo the necessary evaluations for requesting the new medical waiver/exception to policy through the appropriate US Army Aviation Waiver Authority. The parent nation is responsible for all costs per established agreements. The medical examination/aeromedical summary will be referred from the US DOD flight surgeon to the Director, U.S. Army Aeromedical Activity, (MCXY-AER), Building 301, Fort Rucker, AL 36362-5377, for advice, recommendation for waiver/exception to policy approval. Approval/disapproval of waiver/exception to policy requests for IMS will be IAW AR 40-501, paragraph 6-20a. Temporary upsplits (DA Form 4186) may be given pending receipt of the waiver per the Army's Aeromedical Policy Letters.

5. Questions should be referred to the US Army Aeromedical Activity. POC is the Director at 334-255-7430, or director@usaama.amedd.army.mil.

Final Note: Any Problems, Errors, Corrections, Or Syntax Improvements, Please Contact the Director, USAAMA, at 334-255-7430 (DSN 558) OR director@aama.amedd.army.mil. Thank you.